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Burning Down the House: Do Brazil's Forest Management Policies Violate the No-harm Rule under the CBD and Customary International Law?

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BURNING DOWN THE HOUSE: DO BRAZIL’S FOREST MANAGEMENT POLICIES VIOLATE THE NO-HARM RULE UNDER THE CBD AND CUSTOMARY INTERNATIONAL LAW?

RUSLAN KLAFEHN*

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I. INTRODUCTION

On August 22, 2019, President of France, Emanuel Macron, tweeted, “Our house is burning. Literally. The Amazon rain forest—the lungs which produces twenty percent of our planet’s oxygen—is on fire. It is an international crisis. Members of the G7 Summit, let’s

discuss this emergency first order in two days!"¹ Macron's tweet responded to ongoing fires in the Brazilian Amazon, which totaled 87,000 fires as of August 29, 2019,² marking the highest number of fires since 2010.³ Data from Instituto Nacional de Pesquisas Espaciais (INPE), Brazil's space agency, shows a similar trend of increased forest fire rates.⁴

While the metaphor that the Amazon Rainforest is the world's lungs is flawed,⁵ the Amazon Rainforest is crucial to maintaining the world's shared environment.⁶ The Amazon Rainforest contains much of the world's freshwater and biodiversity, and contributes greatly to global

1. Emmanuel Macron, (@EmmanuelMacron), TWITTER (Aug. 22, 2019, 3:15 PM), <https://twitter.com/emmanuelmacron/status/1164617008962527232>.

2. See Lucy Rodgers et al., *The Amazon in Brazil is on Fire – How Bad is It?*, BBC NEWS (Aug. 30, 2019), <https://www.bbc.com/news/world-latin-america-49433767> (detailing that Brazilian President Jair Bolsonaro subsequently "refused a G7 offer of \$22m (£18m) following a dispute with French President Emmanuel Macron").

3. See *id.* (reporting that January through August, 2019 marked the highest forest fire rates since 2010); *accord Uptick in Amazon Fire Activity in 2019*, NASA EARTH OBSERVATORY (Aug. 19, 2019), <https://www.earthobservatory.nasa.gov/images/145498/uptick-in-amazon-fire-activity-in-2019>, ("MODIS [Moderate Resolution Imaging Spectroradiometer] active fire detections in 2019 are higher across the Brazilian Amazon than in any year since 2010.").

4. See Rodgers, *supra* note 2 (reporting INPE's calculations that forest fires from January 1 to August 29, which includes both human-caused and natural fires, increased by seventy-six percent).

5. See Christian Beer et al., *Terrestrial Gross Carbon Dioxide Uptake: Global Distribution and Covariation with Climate*, 329 SCIENCE 834, 836 (2010) (finding tropical forests comprise of thirty four percent of global terrestrial oxygen production). The Amazon Rainforest comprises approximately half of tropical forest area in the world reducing its oxygen production to approximately sixteen percent; see also Yadvinder Malhi, *Does the Amazon Provide 20% of Our Oxygen?*, TRAVELS IN ECOSYSTEM SCIENCE BLOG (Aug. 24, 2019), <http://www.yadvindermalhi.org/blog/does-the-amazon-provide-20-of-our-oxygen> (last visited Sept. 29, 2019) (explaining that this does not account for non-terrestrial production from sources such as phytoplankton and accordingly, the Amazon Rainforest produces about nine percent of the world's oxygen production).

6. See David Werth & Roni Avissar, *The Local and Global Effects of Amazon Deforestation*, 107 J. GEOPHYSICAL RES. 1, 5–6 (noting statistically significant reductions in rainfall as far away as the Dakotas and the Midwest of the United States as deforestation in the Amazon increases and the impact of such rainfall on agricultural productivity).

carbon sequestration.⁷ Therefore, Amazon Rainforest deforestation can have significant impacts on the environment and on biodiversity because deforestation degrades habitats for flora and fauna, and deforestation increases greenhouse gas concentrations.⁸

This Comment argues that the current Brazilian Forest Code violates the no-harm rule as recognized by customary international law and by Article 3 of the Convention on Biological Diversity (CBD).⁹ Part II of this Comment provides overviews of the regional and global importance of the Amazon Rainforest, the development of the no-harm rule in customary international law, case studies pertaining to transboundary harm, relevant CBD provisions, and an overview of Brazil's legal framework for forest management.¹⁰ Part

7. See *The Amazon Basin Forest*, YALE SCH. OF FORESTRY & ENVTL. STUD., <https://globalforestatlas.yale.edu/region/amazon> (last visited Nov. 24, 2019) [hereinafter *Amazon Basin Forest*] (noting that the Amazon Rainforest Ecosystem contains approximately fifteen percent of the world's land biodiversity and approximately twenty-five percent of the world's freshwater); see also *Preserving the Amazon: A Shared Moral Imperative: Hearing Before the Subcomm. on the W. Hemisphere, Civilian Sec., and Trade of the H. Comm. on Foreign Affairs*, 116th Cong. 1, 3 (2019) [hereinafter *de Bolle, Amazon Rainforest Hearing*] (statement of Monica de Bolle, PhD, Riordan Roett Chair in Latin American Studies & Director of Latin American Studies and Emerging Markets, School of Advanced International Studies, Johns Hopkins University) (testifying that the Amazon Rainforest stores approximately sixty- to eighty-billion tons of carbon, and deforestation activities could cause the Amazon to emit as much as 200 million tons of carbon); Noelle Eckley Selin, *Carbon Sequestration*, ENCYCLOPAEDIA BRITANNICA (Jan. 16, 2019), <https://www.britannica.com/technology/carbon-sequestration> (“Carbon sequestration occurs both naturally and as a result of anthropogenic activities and typically refers to the storage of carbon that has the immediate potential to become carbon dioxide gas.”).

8. See Xingli Giam, *Global Biodiversity Loss from Tropical Deforestation*, 114 PNAS 5775, 5776 (2017) (calculating biodiversity loss due to deforestation in, *inter alia*, ants, dung beetles, and trees would be approximately 43.8 percent, 29.9 percent, and 19.9%, respectively, which equates to biodiversity loss at least two orders of magnitude higher than four of the five previous mass extinctions, and biodiversity loss 2,000 to 20,000 times higher than the background extinction rate and concluding “tropical forest loss/degradation alone, even without considering other human stressors such as climate change and habitat loss in other ecosystems, will precipitate a mass extinction event over the next couple of centuries.”); see also *de Bolle, Amazon Rainforest Hearing*, *supra* note 7, at 3 (testifying that deforestation activities can cause carbon releases of up to 200 million tons per year).

9. See Convention on Biological Diversity, *opened for signature* Jun. 5, 1992, 1760 U.N.T.S. 79 [hereinafter CBD].

10. See discussion *infra* Part II.

III of this Comment argues that Brazil's actions violate due diligence. Furthermore, Brazil's current framework violates the no-harm rule as recognized in customary international law and CBD Article 3 and supporting articles because Brazil's framework encourages deforestation and accelerates a dieback scenario and has already negatively affected biodiversity and the environment within the greater Amazon Forest Basin.¹¹ Part IV recommends strengthening the Amazon Fund, conferring legal rights to the Amazon Rainforest, and encouraging Peru to bring a case before the International Court of Justice (ICJ) against Brazil as solutions to ensure international cooperation and protection for the Amazon Rainforest.¹²

II. BACKGROUND

A. THE AMAZON RAINFOREST

The Amazon Rainforest covers nearly six million square kilometers of land, houses a significant portion of the world's biodiversity, and contains much of the world's freshwater.¹³ More importantly, the Amazon Rainforest acts as a carbon sink, absorbing carbon through a process known as carbon sequestration.¹⁴ However, recent studies from the University of California and Nature Magazine examining the Amazon Rainforest's carbon sequestration capacity have shown that the Amazon Rainforest's carbon uptake—the ability to capture and store carbon dioxide—is declining, with scientists now calling into question its status as a carbon sink.¹⁵ A primary driver of this reduction

11. See discussion *infra* Part III.

12. See discussion *infra* Part IV.

13. See *Rainforest Stats*, SAVE THE AMAZON, <https://www.savetheamazon.org/rainforeststats.htm> (last visited Nov. 9, 2019) (noting one hectare may contain 750 types of trees and 1500 plant species, over 10 million species of plants, animals, and insects live in tropical rainforests, and the Amazon Basin contains one-fifth of the world's fresh water); *The Amazon Basin Forest*, *supra* note 7 (noting the Amazon Rainforest contains approximately ten to fifteen percent of the world's biodiversity, and it contains approximately twenty-five percent of the world's freshwater).

14. See R. J. W. Brienen et al., *Long-Term Decline of the Amazon Carbon Sink*, 519 NATURE 344, 344 (2015) (noting that the Amazon Rainforest's carbon uptake is optimistically around 650 million metric tons per year).

15. See *id.* (noting some scientific models predict a dieback scenario while others models predict the Amazon Rainforest will continue to act as a carbon sink well into

in carbon uptake is deforestation.¹⁶

The Brazilian Amazon encompasses roughly sixty percent of the Amazon Rainforest.¹⁷ With the Brazilian Amazon storing between sixty and eighty billion metric tons of carbon, continuing deforestation or its equivalent through the 2012 Forest Code's¹⁸ reductions in protected areas, amnesty from reforestation efforts, and relaxed enforcement of current anti-deforestation policies will have detrimental impacts not just for the countries in the Amazon Basin, but for the world.¹⁹

Forest dieback occurs when forest mortality, defined as forest tree death, is at an unusually high level.²⁰ Working in concert, drivers for dieback scenarios include land-use development and climate change.²¹

the 21st century); *see also* Christina Procopiou, *Amazon Rainforest Absorbing Less Carbon Than Expected*, U.C. LABORATORY (Aug. 20, 2019), <https://newscenter.lbl.gov/2019/08/20/amazon-rainforest-absorbing-less-carbon-than-expected/> (noting that when accounting for phosphorus deficiencies in soil, projected carbon uptake could decrease by up to fifty percent in the Amazon).

16. *See de Bolle, Amazon Rainforest Hearing, supra* note 7, at 3 (finding that deforestation can release as much as 200 million metric tons of carbon into the atmosphere every year); *see also* Gregory P. Asner et al., *Drought Stress and Carbon Uptake in an Amazon Forest Measured With Spaceborne Imaging Spectroscopy*, 101 PNAS 6039, 6039–41 (2004) (noting release of carbon from deforestation can increase drought severity, which in turn leads to reduced tree growth and tree mortality and thus decreased ability to sequester carbon); Brienen, *supra* note 14, at 346 (finding the Amazon Rainforest's carbon sink decline is in part due to "a sustained long-term increase in tree mortality").

17. *See The Amazon Basin Forest, supra* note 7 (approximating the Brazilian Amazon to encompass five million square kilometers of the nearly eight million square kilometers of which the Amazon Rainforest consists).

18. *See* Lei No. 12.651 [Forest Code], de 25 de Maio de 2012, DIÁRIO OFICIAL DA UNIÃO [D.O.U.] de 28.05.2012 (Braz.).

19. *See id.* ch. II(I) art. 4 (preservation area demarcations); *id.* ch. XIII (II) art. 61(b) (amnesty provision); *id.* ch. IV(I) art. 12 ¶ 5 (legal reserve area reductions); *see also* de Bolle, *Amazon Rainforest Hearing, supra* note 7, at 3–4 (detailing Bolsonaro's policy shifts towards economic development of the Brazilian Amazon rather than preservation and reforestation).

20. *See* William M. Ciesla & Edwin Donaubauer, *Decline and Dieback of Trees and Forests*, 3 (Food & Agric. Org., Forestry Working Paper No. 120, 1994) (defining forest dieback as "an episodic event characterized by premature, progressive loss of tree and stand [vigor] and health over a given period without obvious evidence of a single clearly identifiable causal factor such as physical disturbance or attack by an aggressive disease or insect").

21. *See* Craig D. Allen, *Climate-Induced Forest Dieback: An Escalating Global*

In the Brazilian Amazon, activities such as logging and ranching weaken the Amazon Rainforest's fire resistance not only through fragmentation and thinning of the forest, but also by providing kindling for future fires.²² These activities increase forest mortality because they cause an increase in droughts in the Amazon in tandem with warming ocean temperatures.²³

Tree mortality and carbon sequestration ability have a negative relationship.²⁴ With less forest area, there is less photosynthesis and storage of carbon.²⁵ At the tipping point to a dieback scenario, deforestation could turn the Amazon into a grassland-type ecosystem with major ecological and economic impacts, as a grassland-type ecosystem would not be able to support a rainforest ecosystem and would adversely impact biodiversity.²⁶ Decreases in carbon

Phenomenon?, 60 UNASYLVA 43, 43–44 (2009) (noting the sensitivity of tropical forests to drought and finding chronic climate-induced water stress will directly cause tree mortality); Anthony J. Bebbington et al., *Resource Extraction and Infrastructure Threaten Forest Cover and Community Rights*, 115 PNAS 13164, 13165 (2018) (finding that deforestation typically attributable to agricultural land-use development is facilitated through development related to agriculture such as expansion of roadways, railways, port facilities, and other infrastructure).

22. See Daniel C. Nepstad, *Interactions Among Amazon Land Use, Forests and Climate: Prospects for a Near-term Forest Tipping Point*, 363 PHIL. TRANS. R. SOC. B 1737, 1739 (2008) (explaining reduced rainfall can lead to droughts, which make the forest better suited for logging activities and make trees susceptible to forest fires, thus leading to forest fragmentation, which in turn leads to increased tree mortality).

23. See *id.* (explaining that droughts can lead to the death of canopy trees which opens the Amazon Rainforest to further solar radiation, thus increasing the heat at lower levels and making forests more susceptible to fires); Allen, *supra* note 21, at 43–44 (noting climate-induced water stress directly contributes to tree mortality and reporting on the link between forest mortality to severe El-Nino events).

24. See Nepstad, *supra* note 22, at 1741 (explaining carbon release from deforestation, which could release reduce carbon forest stocks by up to fifteen percent, would induce drought that could cause a ten percent reduction in forest biomass).

25. See *Carbon Sequestration*, U.S. DEPT. OF AGRIC. FOREST SERV. (Oct. 7, 2016), <https://www.fs.fed.us/ecosystemservices/carbon.shtml> (explaining plants take carbon out of the air when photosynthesizing).

26. See Nepstad, *supra* note 22, at 1740 (noting deforestation could lead to reductions in rainfall); Thomas E. Lovejoy & Carlos Nobre, *Amazon Tipping Point*, SCI. ADVANCES (Feb. 21, 2018), <https://advances.sciencemag.org/content/advances/4/2/eaat2340.full.pdf>, (noting the consensus that a four-degree centigrade increase in temperatures would lead to a

sequestration and subsequent increases in greenhouse gas emissions, in turn, contribute to climate change because the Amazon Rainforest begins to release some of its stored carbon.²⁷ Climate change warms the oceans and contributes to droughts.²⁸ The synergy of these feedback loops initiates the dieback scenario.²⁹

B. THE NO-HARM RULE

1. *The No-Harm Rule in Customary International Law*

The no-harm rule is widely recognized as customary international law.³⁰ The no-harm rule provides that States have a sovereign right to exploit their resources, and they are responsible for ensuring that exercise of such a right does not damage the environment of other States or areas outside of their jurisdiction.³¹ Even before States agreed to the no-harm rule as customary international law, case law at the international level developed the principle.³² However, States have since accepted the no-harm rule as customary law because they have signed on to both the Stockholm Declaration and the Rio Declaration.³³ Therefore, the no-harm rule is recognized as customary

degraded-savanna state for the Amazon Rainforest).

27. See Nepstad, *supra* note 22, at 1741 (noting global warming drives increases in air temperature and drought severity, which drives forest vulnerability and ultimately tree mortality).

28. See *id.* at 1739 (explaining that as sea temperatures rise, the efficacy of El-Nino events will increase, leading to more intense droughts).

29. See *id.* at 1743–44 (concluding synergy between economic and ecological trends in the Brazilian Amazon could lead to massive dieback turning the Amazon Rainforest into a savannah).

30. See, e.g., *Trail Smelter (U.S. v. Can.)*, 3 R.I.A.A. 1905, 1965 (Ottawa Conv. 1941); *Corfu Channel (U.K. v. Alb.)*, 1949 I.C.J. 4, 22 (Apr. 9); *Pulp Mills on River Uruguay (Arg. v. Uru.)*, 2010 I.C.J. 14, ¶ 101 (Apr. 20); U.N. Conference on the Human Environment, *Stockholm Declaration of the U.N. Conference on the Human Environment*, prin. 21, U.N. Doc. A/CONF.48/14/Rev.1 (June 16, 1972) [hereinafter *Stockholm Declaration*]; U.N. Conference on Environment and Development, *Rio Declaration on Environment and Development*, U.N. Doc. A/CONF.151/26/Rev.1 (Vol. I), annex I (Aug. 12, 1992) [hereinafter *Rio Declaration*].

31. See *supra* note 30.

32. See *Trail Smelter*, 3 R.I.A.A. at 1965 (first iteration of the no-harm rule in modern international law); see also *Corfu Channel*, 1949 I.C.J. at 22 (ICJ's first iteration of the no-harm rule); *Lake Lanoux (Fr. v. Spain)* 12 R.I.A.A. 281, 304 (Arb. Trib. 1957) (discussing the no-harm rule in context of water rights).

33. See *Stockholm Declaration*, *supra* note 30, prin. 21; *Rio Declaration*, *supra*

international law.

The ICJ is important to adjudicating a dispute over the transboundary impacts. However, the ICJ might be reluctant to hear environmental cases because they may be damaging to the ICJ's reputation.³⁴ Moreover, most principles of international environmental law are established through negotiations rather than ICJ adjudication.³⁵ The international community's actions concerning forests follow this preference for negotiation rather than adjudication.³⁶ Many treaties contain provisions regulating forests, but there is virtually no ICJ case law on the protection or regulation of forests.³⁷ Regardless, ICJ case law has developed important principles in international environmental law such as the no-harm rule.³⁸ Thus, to continue to develop the no-harm rule in the context of forest and ecosystem protection, resolution

note 30, prin. 2 (reiterating through principle 2, Principle 21 of the Stockholm Declaration). Both declarations, however, are technically "soft law" or non-binding law. See Arif Ahmed & Md. Jahid Mustofa, *Role of Soft Law in Environmental Protection: An Overview*, 4 GLOBAL J. POL. & L. RES. 1, 2 ("Soft law refers to international norms that are deliberately non-binding in character but still have legal relevance, located in the twilight between law and politics."). Yet, the international community's treatment of the Stockholm and Rio Declaration demonstrates the no-harm rule's status as customary international law. See Foo Kim Boon, *The Rio Declaration and Its Influence on International Environmental Law*, SING. J. LEGAL STUD. 347, 351–52 (1992) (characterizing Principle 21 of the Stockholm Declaration as a definitive example of soft-law that has become customary law because it has been inserted into several treaties and reiterates the decisions of earlier authoritative cases such as *Trail Smelter* and *Lake Lanoux*).

34. Daniel Bodansky, *The Role of the International Court of Justice in Addressing Climate Change: Some Preliminary Reflections*, 49 ARIZ. ST. L.J. 689, 708 (2017) (arguing international courts would expose themselves to many consequences, such as reputational damage by adjudicating climate change cases with few benefits, because States are already entrenched in their positions on climate change).

35. See *id.* at 691 (detailing preferred methods of establishing international law principles).

36. See Barbara M.G.S. Ruis, *No Forest Convention but Ten Tree Treaties*, FOOD & AGRIC. ORG. OF THE U.N. (2001), <http://www.fao.org/3/y1237e/y1237e03.htm> (examining international law principles with respect to forests in multilateral environmental treaties).

37. See *Laws and Cases*, INFORMEA, https://www.informea.org/en/search?f%5B0%5D=type%3Acourt_decisions&text=forest (last visited Mar. 28, 2020) (containing no ICJ case law relating to forests).

38. See *Corfu Channel (U.K. v. Alb.)* 1949 I.C.J. 4, 22 (Apr. 9) (reaffirming the no-harm rule).

by the ICJ is important because the ICJ could most comprehensively address the present legal issues.³⁹

i. From Transboundary Harm to Transboundary Environmental Harm

*Corfu Channel*⁴⁰ has a place of primacy within the realm of international environmental law because it articulates the no-harm rule, the primary vehicle for international environmental litigation.⁴¹ *Corfu Channel* arose when mines in Albanian territorial waters damaged two British warships navigating those waters.⁴² The ICJ found that while Albania neither ordered another country to place the mines, nor did it place the mines there itself, the mines could not have been in Albania's waters without Albania's knowledge.⁴³ In assigning liability to Albania for the destruction of two British warships in Albanian waters, the Court reaffirmed the principle that every State is obligated "not to allow knowingly its territory to be used for acts contrary to the rights of other States."⁴⁴

The *Nuclear Tests*⁴⁵ cases further developed the no-harm rule by framing the no-harm rule in an environmental and public health

39. See Bodansky, *supra* note 34, at 701 (arguing ICJ has "the most general subject matter jurisdiction of any international tribunal," and its decisions as the principal judicial body of the U.N. would have more legal weight).

40. See *Corfu Channel*, 1949 I.C.J. at 22.

41. See Jorge E. Viñuales, *The Contribution of the International Court of Justice to the Development of International Environmental Law: A Contemporary Assessment*, 32 *FORDHAM INT'L L.J.* 232, 238 (2008) (characterizing *Corfu Channel*'s importance to international environmental law in that the factual background of *Corfu Channel* incorporated the no-harm rule as expressed in *Trail Smelter* into general international law).

42. See *Corfu Channel*, 1949 I.C.J. at 12–13.

43. See *id.* at 18–19 (finding that given Albania's vigilance of ships passing through its territorial waters and its occasional use of force towards such an end, Albania must have kept a close watch on any mine-laying in its territorial waters).

44. *Id.* at 22; accord *Trail Smelter* (U.S. v. Can.), 3 R.I.A.A. 1905, 1965 (Ottawa Conv. 1941) ("No State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence.").

45. See *Nuclear Tests* (Austl. v. Fr.) 1974 I.C.J. 253 (Dec. 20); *Nuclear Tests* (N. Z. v. Fr.) 1974 I.C.J. 457 (Dec. 20).

context.⁴⁶ *Nuclear Tests* arose when France conducted numerous atmospheric tests of nuclear weapons in French Polynesia in the late-1960s and early-1970s.⁴⁷ Ultimately the ICJ dismissed the case on admissibility grounds but through separate opinions, the ICJ looked more closely at the no-harm rule in the environmental context.⁴⁸

ii. *The Rise of Causation Requirements and Additional Obligations Under the No-Harm Rule*

*Pulp Mills on River Uruguay*⁴⁹ reiterated the no-harm rule.⁵⁰ *Pulp Mills* developed the no-harm rule by requiring States to prevent significant transboundary environmental harm to the best of their capabilities and stating its applicability in an environmental context.⁵¹ *Pulp Mills* arose from the planned construction of two pulp mills, authorized by Uruguay, on the banks of the Uruguay River.⁵² Argentina took issue with the authorization of construction on these two plants because it believed the authorizations violated the Statute of the Uruguay River.⁵³ In deciding the case, the ICJ read a due diligence requirement into the no-harm rule.⁵⁴

The consolidated judgment of *Certain Activities Carried Out by*

46. See Marte Jervan, *The Prohibition of Transboundary Environmental Harm: An Analysis of the Contribution of the International Court of Justice to the Development of the No-Harm Rule*, 31 (Aug. 25, 2014) (unpublished research paper, University of Oslo Faculty of Law) (on file with PluriCourts Research Paper series) (describing shift to environmental and public health concerns in potential application of the no-harm rule).

47. See *Nuclear Tests* (Austl.) 1974 I.C.J. at ¶¶ 17–18; *Nuclear Tests* (N. Z.) 1974 I.C.J. at ¶¶ 17–18.

48. See Jervan, *supra* note 46, at 31–33 (noting separate opinions stated that if the no-harm rule in the context of environmental harm existed then it would be justiciable by the ICJ, with a dissenting opinion stating that such a rule existed).

49. See *Pulp Mills on River Uruguay* (Arg. v. Uru.), 2010 I.C.J. 14 (Apr. 20).

50. See *id.* at ¶ 101 (quoting *Corfu Channel* (U.K. v. Alb.), Judgment, 1949 I.C.J. 4, 22 (Apr. 9)).

51. See *id.* (citing *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, 1996 I.C.J. 226, ¶ 29 (July 8)) (recognizing prohibition on transboundary environmental harm) (emphasis added).

52. See *id.* at ¶ 25.

53. See *id.* at ¶ 23.

54. See *id.* at ¶ 101 (“A State is thus obliged to use all the means at its disposal in order to avoid activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the environment of another State.”).

*Nicaragua in the Border Area*⁵⁵ and *Construction of a Road in Costa Rica Along the San Juan River*,⁵⁶ further developed the no-harm rule by examining whether activities carried out by the two countries rose to violations.⁵⁷ In this analysis, the ICJ required a causation analysis for a successful claim of transboundary harm.⁵⁸ The cases arose out of the construction of a road on the San Juan River, which runs along the border of Costa Rica and Nicaragua and the dredging of a river for canal construction, both of which caused increase sediment levels.⁵⁹ The ICJ also created a new procedural obligation for States.⁶⁰

a. The No-Harm Rule's Due Diligence Requirements

Due diligence requires that a State do all it can to prevent or avoid causing a transboundary harm.⁶¹ A State may still cause a transboundary harm and meet due diligence requirements under the no-harm rule.⁶² The test instead asks whether the State's actions will prevent foreseeable environmental damage or at least lessen the risk

55. *Certain Activities Carried Out by Nicaragua in Border Area (Costa Rica v. Nicar.)* 2015 I.C.J. 665 (Dec. 16).

56. *Construction of Road in Costa Rica Along San Juan River (Nicar. v. Costa Rica)* 2015 I.C.J. 665 (Dec. 16).

57. See Kerryn Anne Brent, *The Certain Activities Case: What Implications for the No-Harm Rule*, 20 ASIA PAC. J. ENVTL. L. 28, 51 (2017) (summarizing ICJ's resolution to whether Costa Rica and Nicaragua violated the no-harm rule).

58. See *id.* at 52 (noting no transboundary harm where the "chain of causation" did not show that Costa Rica's road harmed Nicaragua).

59. See *Certain Activities*, 2015 I.C.J. at ¶¶ 56–64 (giving factual context to the case before the ICJ).

60. See Brent, *supra* note 57, at 53 (arguing *Certain Activities* gave rise to additional procedural requirements by requiring States to determine before engaging in activity whether that activity will pose a risk of being a significant transboundary harm).

61. See *Pulp Mills on River Uruguay (Arg. v. Uru.)*, 2010 I.C.J. 14, ¶ 101 (Apr. 20).

62. See Int'l Law Comm'n, Rep. on the Work of Its Fifty-Third Session, U.N. Doc. No. A/56/10, arts. 3, 7 (2001) [hereinafter ILC Draft Articles] (stating "the State of origin shall take all appropriate measures to prevent significant transboundary harm or at any event to minimize the risk thereof, and "any decision in respect of the authorization of an activity within the scope of the present articles shall, in particular, be based on an assessment of the possible transboundary harm caused by that activity, including any environmental impact assessment," respectively).

of the damage occurring.⁶³

In *Pulp Mills*, the ICJ tempered the extent of due diligence. *Pulp Mills* contains strong language regarding the extent to which States must act in order to meet due diligence.⁶⁴ However, the ICJ qualified that “it is for each State to determine . . . the specific content of the environmental impact assessment required in each case . . . as well as to the need to exercise due diligence in conducting such an assessment.”⁶⁵

2. *The No-Harm Rule under the CBD*

i. *Relevant Provisions*

CBD Article 1 states three objectives: “the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.”⁶⁶ The CBD further defines biological diversity as the variability within and between all organisms and ecosystems in Article II.⁶⁷

CBD Article 3 contains the no-harm rule under the treaty.⁶⁸ Article 3 recognizes a State’s right to exploit its resources.⁶⁹ However, Article 3 also imposes a responsibility on States to prevent transboundary harm, thus creating some tension.⁷⁰ Therefore, a given State must

63. *Certain Activities*, 2015 I.C.J. at ¶¶ 117, 119 (noting Nicaragua’s argument that the harm complained by Costa Rica was “unforeseeable” and finding that Costa Rica had not provided sufficient evidence to establish a causal link).

64. *See Pulp Mills*, 2010 I.C.J. at ¶ 205 (“The Court also considers that an environmental impact assessment *must* be conducted prior to the implementation of a project. Moreover, once operations have started and, where necessary, throughout the life of the project, continuous monitoring of its effects on the environment *shall* be undertaken.”) (emphasis added)

65. *Id.*

66. CBD, *supra* note 9, art. 1.

67. *See id.* art. 2, ¶ 1 (definition).

68. *See id.* art. 3 (“States have . . . the sovereign right to exploit their own resources pursuant to their own environmental policies.”).

69. *See id.*

70. *See id.* (no-harm rule); Catherine Tinker, *A “New Breed” of Treaty: The United Nations Convention on Biological Diversity*, 13 PACE ENVTL. L. REV. 191, 203–04 (1995) (arguing flexibility for Nation States to decide policy and legislative direction is limited by the responsibilities agreed to under the CBD).

abide by the no-harm rule.⁷¹

Article 3's no-harm rule relates to components of biological diversity and processes and activities conducted by States under Article 4 or alternatively under Article 14.⁷² CBD Article 4 provides that the CBD applies to components⁷³ of biological diversity⁷⁴ within a nation's jurisdiction, and to processes and activities under the control or jurisdiction of a nation, regardless of where these processes and activities are carried out and where effects may occur.⁷⁵ CBD Article 14 provides due diligence requirements for projects, programs, and policies that may cause a transboundary harm.⁷⁶

ii. Case Studies

Although case studies are not ICJ jurisprudence, they are important to characterizing what constitutes a transboundary harm. The Ad Hoc Working Group of Technical and Legal Experts, a working group of the CBD, noted, *inter alia*, the following two case studies regarding the fires in Indonesia and the Aral Sea as examples of transboundary environmental harms.⁷⁷ While the working group noted other examples, these two case studies focus on land-use activities and the resulting consequences for biodiversity and climate change.⁷⁸

71. See Tinker, *supra* note 70, at 204 (noting national legislation would have to meet the responsibility not to cause transboundary environmental damage under the CBD).

72. See CBD, *supra* note 9, arts. 3–4.

73. See *id.* art. 2, ¶ 2 (defining biodiversity as diversity of components, meaning between and within species and ecosystems).

74. See *id.* art. 2, ¶ 1 (definition).

75. See *id.* art. 4(a)–(b) (providing CBD's jurisdictional scope).

76. See *id.* art. 14(1)(a)–(b).

77. See Executive Secretary of the Convention on Biological Diversity, *Summary of Case-Law and Case-Studies Pertaining to Transboundary Environmental Damage*, ¶¶ 46–47, U.N. Doc. UNEP/CBD/EG-L&R/1/INF/2 (Sept. 20, 2005) [hereinafter *Summary of Transboundary Environmental Damage*] (providing case studies found pertinent, by the Executive Secretary to the CBD, to studying transboundary harm such as the salinization and exploitation of the Aral Sea and the exploitation by private parties of Indonesia forests, which led to massive forest fires in the late 1990s).

78. See *id.*

a. *Fires in Indonesia*

The fires in Indonesia in the late 1990s demonstrate a transboundary environmental harm with many similarities to the fires in the Brazilian Amazon as smoke spread to neighboring countries.⁷⁹ The fires in Indonesia caused CO₂ emissions to spike for that year with the fires generating more CO₂ than the planet's biosphere's removal capacity.⁸⁰ Additionally, the fires had immense biodiversity impacts.⁸¹

b. *The Aral Sea*

The Aral Sea's water degradation also demonstrates a transboundary environmental harm of a shared resource between countries bordering the Aral Sea.⁸² Beginning in 1960, the Soviet Union hoped to turn the Aral Sea region into productive farming land and set out an economic development plan for the region.⁸³ Intense and irresponsible irrigation followed and subsequently decimated the Aral Sea region.⁸⁴ Since then, five Central Asian nations have come

79. Compare Joel S. Levine et al., *Wildland Fires and the Environment: A Global Synthesis*, 1, UNEP/DEIA&EW/TR.99-1 (1999) (describing private parties and the government's burning of forests in order to clear forest land and the effects of the same on the population of endangered species and on human health), with Shivali Best, *Amazon Rainforest Fires Threaten 265 Endangered Species*, *WWF Warns*, MIRROR UK (Sept. 9, 2019), <https://www.mirror.co.uk/science/amazon-rainforest-fires-threaten-265-19911335> (reporting WWF's statement that the Brazilian forest fires are stressing endangered species such as the giant armadillo, the white-lipped peccary, and the giant anteater).

80. See *Summary of Transboundary Environmental Damage*, *supra* note 77, ¶ 47.

81. See Levine, *supra* note 79, at 10–11 (finding that the Indonesian forest fires seriously impacted 19 protected areas, and orangutan and hornbill populations in Indonesia because these species rely on fruit-bearing trees which take years to recover).

82. See Rama Sampath Kumar, *Aral Sea: Environmental Tragedy in Central Asia*, 37 *ECON. & POL. WKLY.* 3797, 3798 (2002) (noting that the Aral Sea's demise turned fertile regions of Kazakhstan, Uzbekistan and Turkmenistan into barren waste lands).

83. See *id.* at 3798 (2002) (describing Soviet Union's expansion of the economic plan from cotton production to produce and characterization of the Aral Sea as a source of limitless water).

84. See *id.* at 3799 (finding, *inter alia*, seventy-five percent of the original volume of the Aral Sea had evaporated, increased salinity caused fish to all but disappear from the Aral Sea, and the Aral Sea's warming and cooling functions dramatically decreased).

together and with the U.N.'s help, aim to address the disappearing Aral Sea.⁸⁵ However, change has been slow, with the Central Asian nations placing priority on the welfare of cotton farmers in the region.⁸⁶

3. "Soft Law" Approach to the No-Harm Rule

The International Law Commission's (ILC) Draft Articles on Prevention of Transboundary Harm from Hazardous Activities provides additional context to determining transboundary harm in the ICJ.⁸⁷ Legal scholars and States debate the legal status of ILC draft articles; they debate whether ILC draft articles are hard law or soft law.⁸⁸ The treatment of the Draft Articles on Prevention from

85. See *id.* at 3801 (noting the establishment of a joint commission and funding from the U.N. for restoration projects).

86. See *id.* (noting cotton exports as a major source of income in the Aral Sea region, limiting fast change).

87. See generally ILC Draft Articles, *supra* note 62, arts. 3, 7 (outlining the definitions of transboundary harm and duty of prevention).

88. Countries have debated on the status of the ILC Draft Articles on State Responsibility. See, e.g., Press Release, General Assembly, Legal Committee Delegates Differ on Applying Rules for State Responsibility: Convention Needed, or Customary Law Adequate?, U.N. Press Release GA/L/3395 (Oct. 19, 2010) (reporting Germany's position that the ILC Draft Articles on State Responsibility are legally binding statements of customary international law and Portugal's position that they need to be incorporated into a "hard-law instrument."). Scholars have debated ILC draft articles more generally. Compare Fernando Lusa Bordin, *Reflections of Customary International Law: The Authority of Codification Conventions and the ILC Draft Articles in International Law*, 63 INT'L & COMP. L.Q. 535, 538 (2014) (noting that soft-law instruments have been taken to be authoritative statements of customary international law and that ILC draft articles have been taken as the *most authoritative* statements on customary international law, but concluding that the authoritativeness of ILC draft articles rest in the distinction between draft articles meant for "codification" and those meant for "progressive development.") (emphasis added), and Elena Baylis, *The International Law Commission's Soft Law Influence*, 13 FIU L. REV. 1007, 1008–09 (2019) (arguing ILC draft articles constitute hard law when they are submitted for consideration in treaties, negotiated, and ratified, but noting that the ILC has recently begun the practice of not submitting draft articles, thereby, issuing the draft articles in a soft-law format), with Lauren Dudley, *Until We Achieve Universal Peace: Implications of the International Law Commission's Draft Articles on the Effects of Armed Conflict on Treaties*, 6 AM. U. NAT'L SEC. L. BRIEF 13, 33 (2016) (arguing that the enlistment of scholars by the ILC in forming draft articles establishes draft articles as a hard law source for jurists because the draft articles are scholarly works), and Laurence R. Helfer & Timothy Meyer, *The Evolution of Codification: A Principal-Agent Theory of the International Law Commission's Influence*, in CUSTOM'S

Transboundary Harm of Hazardous Activities tends to show that these Draft Articles are not yet a hard law source.⁸⁹ The debate on codification of these Draft Articles has not yet finished, with some countries expressing reservations to codifying these Draft Articles.⁹⁰ Yet, even if the status of these Draft Articles is at issue, they still help, in conjunction with hard law sources, to guide a discussion as to when transboundary harm arises.⁹¹

The ILC Draft Articles on Prevention of Transboundary Harm from Hazardous Activities look to four elements to determine whether a transboundary harm has occurred. The ILC examines whether an action is prohibited by international law, whether an action is within the territory and under the jurisdiction and control of the State of origin, whether an action risks causing a transboundary harm, and whether an action results in physical consequences.⁹²

The distinction of legality under international law distinguishes

FUTURE: INTERNATIONAL LAW IN A CHANGING WORLD, 1–2 (Curtis A. Bradley ed., 2016) (arguing States' rejection of ILC draft articles would suggest that the draft articles are not reflections of customary international law).

89. See *supra* note 88 (asserting that ILC draft articles are not generally considered hard law, unless officially codified).

90. See Press Release, General Assembly, Sixth Committee Speakers Argue Whether to Codify Texts on Transboundary Harm, Aquifers into Convention, Leave as Draft Articles, Principles, U.N. Press Release GA/L/3603 (Oct. 22, 2019) (reporting that China and the United Kingdom believe that the no-harm rule under existing international law does not treat transboundary harm in a uniform manner but rather tailors transboundary harm analysis as the subject matter requires, unlike the ILC draft articles); see also Helfer & Meyer, *supra* note 88 (arguing that States' rejection of draft articles indicate that they are not reflections of customary international law).

91. See Baylis, *supra* note 88, at 1010 (“While soft law norms ‘do not impose legally binding obligations,’ they ‘may . . . lay the ground, or constitute the building blocks, for the gradual formation of customary rules or treaty provisions.’ Furthermore, under some circumstances, soft law ‘may be regarded as declaratory, or indicative, of a customary rule, or instead as helping to crystallize such a rule.’ Soft law may also help to shape State practice, or to direct decisionmakers’, scholars’, and advocates’ attention in such a way as to encourage constructive development of the law. In addition, ‘secondary soft law’ interprets and applies existing hard law. Increasingly, actors in the global community have treated soft law norms as persuasive authority.”).

92. See ILC Draft Articles, *supra* note 62, at 149–51 (discussing the legality of action, territory, risk, and physical links in the context of transboundary harm).

between a State's liability and a State's responsibility.⁹³ A territorial link is a necessary condition to imputing liability on a State for its actions.⁹⁴ A transboundary environmental harm by a State action may only occur if there was a significant risk of a transboundary harm at the State action's inception and an objective observer believed the State action to carry that risk.⁹⁵ There must also be a physical link between the State action and the harm for there to be a transboundary environmental harm.⁹⁶ Excluded actions from transboundary environmental harm are monetary, socioeconomic, and other similar policies.⁹⁷

C. BRINGING A CASE AGAINST BRAZIL IN THE ICJ

1. *Peru's Standing to Bring a Case*

Peru is uniquely situated to bring a case before the ICJ against Brazil. Peru not only contains the second largest portion of the Amazon, but it is already feeling the effects of the Brazilian forest fires.⁹⁸ Moreover, there is political will in Peru to do something more to protect the Amazon.⁹⁹

2. *Legal Requirements to Bring a Case*

Bringing a case to the ICJ requires that the case is both within the

93. *See id.* (discussing legality of action in the context of transboundary harm).

94. *See id.* at 150–51 (discussing territory in the context of transboundary harm analysis).

95. *See id.* at 151 (discussing risk in the context of transboundary harm).

96. *See id.* (discussing physical links in the context of transboundary harm).

97. Monetary, socioeconomic, and other similar policies are not typically thought of as having physical consequences and thus are not contemplated by the ILC Draft Articles because the Draft Articles require a physical consequence from the State of origin's activity. *See generally id.*

98. *See The Amazon Basin Forest*, *supra* note 7 (noting that Peru contains ten percent of the Amazon Rainforest); Jessie Yeung, *The Amazon Wildfires Are Causing a Spike in Children's Breathing Problems*, CNN (Oct. 3, 2019), <https://www.cnn.com/2019/10/03/health/amazon-fire-children-breathing-intl-hnk-scli/index.html> (reporting that smoke from the Brazilian forest fires are causing an increased rate of asthma hospitalizations of children in Peru).

99. *Amazon Fires: Seven Countries Sign Forest Protection Pact*, BBC NEWS (Sept. 6, 2019), <https://www.bbc.com/news/world-latin-america-49609702> (quoting Peru's President as saying "good will alone is not enough anymore [to protect the Amazon Rainforest].")

ICJ's jurisdiction and is admissible.¹⁰⁰ The ICJ has jurisdiction over cases under international law brought to it by States and through advisory opinions.¹⁰¹ Treaties may also provide for ICJ jurisdiction as a dispute-resolution mechanism.¹⁰² Regardless of the mechanism of adversarial case submission, the ICJ can only have jurisdiction if both parties consent.¹⁰³ Admissibility focuses on the ICJ's discretionary power, under existing treaties or principles, to hear cases within its jurisdiction.¹⁰⁴ A case may also be inadmissible if the issue presented is moot.¹⁰⁵ For example, a case in which a party protests atmospheric nuclear tests conducted by another party would become moot when that country ceased atmospheric nuclear testing.¹⁰⁶ Thus, to bring a case to the ICJ against Brazil requires resolving the questions of jurisdiction and admissibility.¹⁰⁷

D. BRAZIL'S RESPONSIBILITY TO THE AMAZON RAINFOREST AND LEGAL FRAMEWORK TO COMBAT DEFORESTATION

Brazil contains the majority of the Amazon Rainforest within its jurisdiction, suggesting that policy and legislative shifts in Brazil will have the greatest impact on the Amazon Rainforest ecosystem.¹⁰⁸ Unchecked deforestation in the Brazilian Amazon could lead to

100. See Jan Paulsson, *Jurisdiction and Admissibility*, 693 GLOBAL REFLECTIONS ON INT'L L., COM. & DISP. RESOL. 601, 601 (2005) ("Decisions of tribunals which do not respect jurisdictional limits may be invalidated by a controlling authority.").

101. See *Jurisdiction*, ICJ, <https://www.icj-cij.org/en/jurisdiction>, (last visited Oct. 26, 2019).

102. See CBD, *supra* note 9, art. 27, ¶ 3(b) (providing for ICJ Jurisdiction as a dispute-resolution mechanism).

103. See Paulsson, *supra* note 100, at 601 (noting determinations of admissibility are only made after both parties consent to jurisdiction).

104. See Yuval Shany, *Jurisdiction and Admissibility*, in THE OXFORD HANDBOOK OF INT'L ADJUDICATION 786–87 (Cesare P. R. Romano et al. eds., Dec. 2013) (noting that questions of admissibility depend on whether a case is ripe for adjudication, and whether the ICJ has discretionary power through legal treaties or principles to decide not to hear a case).

105. See *Nuclear Tests (Austl. v. Fr.)* 1974 I.C.J. 253, ¶¶ 57–58 (Dec. 20) (noting the ICJ has discretionary power to choose which cases to hear and will exercise this power when a case is moot).

106. See *id.* at ¶ 41 (finding assurances that nuclear tests would cease made the case inadmissible).

107. See generally Paulsson, *supra* note 100, at 601.

108. See *The Amazon Basin Forest*, *supra* note 7 (sixty percent).

irreversible damage to the entire Amazon Rainforest ecosystem.¹⁰⁹ Therefore, as primary controller of the Amazon, Brazil has a greater responsibility to combat deforestation.¹¹⁰

Brazil's legal framework for forest management has historically been strong, making strides to protect the Amazon and reduce deforestation.¹¹¹ First, the Brazilian Constitution provides strong language by recognizing a right to a healthy environment, creating specific protections for the Amazon Rainforest, and ensuring the efficacy of such rights and protections by government obligations.¹¹² Second, Brazil initiated and is a party to the Amazon Cooperation Treaty.¹¹³ However, environmentalists see the most recent change in the Forest Code, the 2012 Forest Code, as a step backward.¹¹⁴ The election of Jair Bolsonaro to the presidency has only exacerbated deforestation in the Amazon Rainforest because he has implemented changes that undercut Brazil's existing framework.¹¹⁵

109. See Lovejoy & Nobre, *supra* note 26 (noting rainfall is carried westward from the Atlantic Ocean by air masses); see also Nepstad, *supra* note 22, at 1740 (finding drought serves to amplify deforestation because it increases forests' vulnerability to fires).

110. See *supra* notes 89–90 (noting size of the Brazilian Amazon examining impacts of deforestation in the Brazilian Amazon).

111. See Paul Rink, *Regulating the Trees for the Forest: How Indonesia and Brazil Attempt to Reduce Deforestation Through Forestry Policy*, 10 J. ANIMAL & ENVTL. L. 41, 42 (2018) (arguing strong language in the constitution had led to a strong forest code pre-2012 that recognized “natural vegetation” as a public good independent of its economic uses); Maria Antonia Tigre, *Cooperation for Climate Mitigation in Amazonia: Brazil's Emerging Role as a Regional Leader*, 5 TRANSNAT'L ENVTL. L. 401, 419 (2016) (noting Brazil's willingness to take deforestation seriously through ambitious goal setting, which became even more stringent as Brazil was able to meet these goals).

112. See CONSTITUIÇÃO FEDERAL [C.F.] [CONSTITUTION] art. 225 (Braz.).

113. See Treaty for Amazonian Cooperation, July 5, 1978, 1202 U.N.T.S. 51 [hereinafter ACT].

114. See Rink, *supra* note 111, at 43 (explaining that despite some progressive changes in the 2012 Forest Code, three particular provisions allow for greater reduction in preserved land and grant amnesty from restoration to many that illegally deforested land).

115. See de Bolle, *Amazon Rainforest Hearing*, *supra* note 7, at 3–4 (explaining Bolsonaro has, *inter alia*, undermined enforcement policies against illegal deforestation, cut budgets of environmental agencies, and importantly, has targeted the Amazon Fund).

1. *The Constitution*

Brazil's constitutional language with respect to forestry can be found within Article 225.¹¹⁶ Generally, Brazil recognizes a right to a healthy environment; it characterizes a healthy environment as an asset to a healthy life and obligates both the government and citizens to protect the environment for future generations.¹¹⁷

Article 225, Paragraph Four provides that, *inter alia*, the Amazon Rainforest is a part of Brazil's heritage and identity, and it may only be developed to the extent that the environment is still protected.¹¹⁸ Lastly, Article 225, Paragraph One lists seven duties the Brazilian government must fulfill to give efficacy to the protections given to the environment.¹¹⁹

2. *Amazon Cooperation Treaty*

The Amazon Cooperation Treaty (ACT) is a multilateral treaty initiated by Brazil between the eight nations which have jurisdiction over the Amazon Rainforest or are closely connected.¹²⁰ In 1995, these nations created the Amazon Cooperation Treaty Organization (ACTO), the body which is tasked with realizing the ACT's goals.¹²¹ However, the ACTO has had mixed success.¹²²

Moreover, ACT Article IV provides that the parties to the treaty have the exclusive right to utilize their natural resources, and this right

116. See C.F., art. 225 (listing duties to and protection for the Amazon Rainforest).

117. See *id.* ("Everyone has the right to an ecologically balanced environment.").

118. See *id.* art. 225 ¶ 4 (identifying forests which are a part of the "national patrimony.").

119. See *id.* art. 225 ¶ 1 (e.g. preservation of biodiversity, environmental impact assessments for government action, and protection of flora and fauna).

120. See ACT, *supra* note 113, at 71 (Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname, and Venezuela).

121. See *Who We Are*, ACTO, http://www.otca-oficial.info/about/who_we_are (follow "English" hyperlink) (last visited Feb. 19, 2020) ("ACTO coordinates the procedures in the framework of the Amazon Cooperation Treaty (ACT) and expedites the execution of its decisions through its Permanent Secretariat (PS).").

122. See Tigre, *supra* note 111, at 421–22 (arguing ACTO has rarely established long-term strategies for protection of the Amazon but has reproduced satellite imaging techniques in contracting party States to help identify deforestation and share information).

is not “subject to any restrictions other than those arising from International Law.”¹²³ In this respect, the ACTO acts more as a body in which contracting parties can signal to each other general concerns without infringing on national sovereignty.¹²⁴ Therefore, even though the ACT considers conservation in its preamble and various other articles, Brazil is under no obligation under this regional agreement to do so.¹²⁵

3. 2012 Forest Code

The 2012 Forest Code stripped away key protections for the Amazon Rainforest.¹²⁶ First, the Forest Code decentralized forest management to some extent giving Brazilian States more freedom in determining delineation standards for Permanent Preservation Areas (APPs) by allowing States to create standards “according to their interests and needs.”¹²⁷ Second, the Forest Code would provide amnesty from restoration to small farmers reducing the amount of land to be restored by approximately fifty-eight percent.¹²⁸ Third, State officials may reduce Legal Reserve areas from eighty percent to fifty percent in certain circumstances.¹²⁹ This could result in deforestation

123. ACT, *supra* note 113, art. IV.

124. See Luisa Leme, *LatAm in Focus: Can International Law Save the Amazon?*, AMERICAS SOCIETY (Sept. 20, 2019), <https://www.as-coa.org/articles/latam-focus-can-international-law-save-amazon> (identifying weakness of the ACTO).

125. See ACT, *supra* note 113, art. IV (restricting sovereignty only to meet international law obligations).

126. See Rink, *supra* note 111, at 43 (describing provisions in the 2012 Forest Code that would allow for more deforestation and grant amnesty from restoration).

127. See Forest Code, ch. II(I), art. 4 (preservation area demarcations); Thiago Bandeira Castelo, *Brazilian Forestry Legislation and to Combat Deforestation Government Policies in the Amazon (Brazilian Amazon)*, 18 AMBIENTE & SOCIEDADE 215, 219–20 (2015) (detailing the application of the 2012 Forest Code).

128. See Forest Code, ch. XIII(II), art. 61(b) (amnesty provision); Castelo, *supra* note 127, at 222; Rink, *supra* note 111, at 43 (detailing the application of the 2012 Forest Code).

129. See Forest Code, ch. IV(I), art. 12, ¶ 5 (legal reserve area reductions); see also FOREST CODE OBSERVATORY, BRAZIL’S FOREST CODE ASSESSMENT 2012 - 2016 39 (Andrea Azevedo & Tiago Reis eds., 2017) (noting the threshold for Legal Reserve lands would be reduced to 50% with ecological and economic zoning plan approval and sixty-five percent public domain and/or indigenous conservation units).

of millions of hectares.¹³⁰

4. *Bolsonaro Policy Shifts*

With the election of Jair Bolsonaro as President of Brazil in January 2019, the Brazilian government has begun to relax enforcement of current forest management policies.¹³¹ Bolsonaro has also made or attempted to make structural changes to the government that will exacerbate deforestation.¹³²

i. *Weakening of Government Agencies*

Since taking office, Bolsonaro has cut the Brazilian Institute of the Environment and Renewable Natural Resources' (IBAMA) budget by twenty-five percent.¹³³ Within this budget cut, Bolsonaro cut twenty-three percent from funds allocated for fighting forest fires.¹³⁴ President Bolsonaro also attempted twice to transfer responsibility for delineating indigenous land from the Ministry of Justice to the Ministry of Agriculture, which the National Congress of Brazil

130. See FOREST CODE OBSERVATORY, *supra* note 129, at 39 (noting such a reduction would be millions of hectares).

131. See de Bolle, *Amazon Rainforest Hearing*, *supra* note 7, at 3–4.

132. See *id.* (discussing Bolsonaro's reduction for forest fire prevention, subversion of enforcing environmental laws, dismissal of government personnel, and opposition to the Amazon Fund, a UNREDD+ initiative to combat deforestation); see also Kelundra Smith, *Forest Fire: An Update on the Amazon Wildfires*, GEORGIA ST. U. NEWS HUB (Feb. 20, 2020), <https://news.gsu.edu/2020/02/20/forest-fire-an-update-on-the-amazon-wildfires/> (believing under-enforcement in the Bolsonaro administration is the cause of the problems in the Brazilian Amazon); Jan Rocha, *Bolsonaro Sends Congress Bill to Open Indigenous Lands to Mining, Fossil Fuels*, MONGABAY, (Feb. 7, 2020), <https://news.mongabay.com/2020/02/bolsonaro-sends-congress-bill-to-open-indigenous-lands-to-mining-fossil-fuels/> (noting under Brazil's constitution, such a bill is likely unconstitutional unless changed).

133. See Jake Spring, *As Fires Race Through Amazon, Brazil's Bolsonaro Weakens Environment Agency*, REUTERS (Aug. 28, 2019), <https://www.reuters.com/article/us-brazil-environment-ibama-exclusive/exclusive-as-fires-race-through-amazon-brazils-bolsonaro-weakens-environment-agency-idUSKCN1VI14I> (reporting that additionally, under Bolsonaro's presidency, punishment for environmental crimes have fallen).

134. See *id.*

blocked soon after.¹³⁵ Bolsonaro also fired the head of INPE.¹³⁶

ii. Decree n. 9759/2019

The Amazon Fund is a Brazilian Reducing Emissions from Deforestation and Forest Degradation Plus (REDD+) initiative that seeks voluntary contributions from other nations for economic development and preservation projects in the Brazilian Amazon and, to some extent, in other Brazilian forests.¹³⁷ The Amazon Fund is managed by the Brazilian Development Bank (BNDES).¹³⁸ Additionally, the Amazon Fund Guidance Committee and the Amazon Fund Technical Committee are charged with monitoring results and ensuring compliance with Brazil's national REDD+ strategy and validating the Ministry of Environment's official carbon emission figures.¹³⁹ Bolsonaro enacted Presidential Decree number 9759/2019 on April 11, 2019 and disbanded both committees.¹⁴⁰ Bolsonaro's actions with respect to the Amazon Fund place its future in jeopardy as Norway and Germany have frozen funding to the Amazon Fund, and their respective investments may have to be returned if the Amazon Fund committees are not restored.¹⁴¹

135. Ernesto Londoño, *Bolsonaro Fires Head of Agency Tracking Amazon Deforestation in Brazil*, NEW YORK TIMES (Aug. 2, 2019), <https://www.nytimes.com/2019/08/02/world/americas/bolsonaro-amazon-deforestation-galvao.html>; *Brazil Judge Blocks Transfer of Control over Indigenous Land*, AL JAZEERA (June 25, 2019), <https://www.aljazeera.com/news/2019/06/brazil-judge-blocks-transfer-control-indigenous-land-190625080628133.html>.

136. See Herton Escobar, *Brazilian Institute Head Fired After Clashing with Nation's President over Deforestation Data*, SCI. MAG. (Aug. 4, 2019), <https://www.sciencemag.org/news/2019/08/brazilian-institute-head-fired-after-clashing-nation-s-president-over-deforestation>.

137. See *What is the Amazon Fund?*, AMAZON FUND, <http://www.amazonfund.gov.br/en/amazon-fund/> (last visited Nov. 22, 2019) (outlining the Amazon Fund and its relevant laws).

138. See *infra* note 253 (explaining BNDES).

139. See Amazon Fund Guidance Committee (COFA), AMAZON FUND, <http://www.amazonfund.gov.br/en/amazon-fund/COFA/> (last visited Nov. 22, 2019) (explaining purpose of COFA); Amazon Fund Technical Committee (CTFA), AMAZON FUND, <http://www.amazonfund.gov.br/en/amazon-fund/CTFA/index.html> (last visited Nov. 22, 2019) (explaining purpose of CTFA).

140. *What is the Amazon Fund?*, *supra* note 137.

141. See discussion *infra* Part IV.A.

5. *Potential to Strengthen Brazil's Legal Framework by Granting Personhood*

Legal personhood for the Amazon Rainforest could create a right of action on behalf of the Amazon Rainforest for citizens concerned with development impacts on the Amazon Rainforest.¹⁴² The conceptualization of environmental personhood grew out of a law review article titled "Should Trees Have Standing?—Toward Legal Rights for Natural Objects."¹⁴³ The article's author, law Professor Christopher Stone, puts forth the idea that if society has recognized legal rights in children, corporations, and other entities that did not have rights in law at one point, then why not give rights to natural objects such as rivers and lakes.¹⁴⁴

Since then, recognition of environmental personhood has grown throughout the world.¹⁴⁵ Legislation, constitutional provisions, and judicial decisions in New Zealand, Ecuador, and even the United States, among others, have granted legal rights to the environment.¹⁴⁶ While some jurisdictions give legal rights to nature as a whole, others specify which subsets of nature receive legal rights and the extent of those legal rights.¹⁴⁷ These instances of environmental personhood could serve as a model for Brazil to decide on giving legal rights to the Amazon Rainforest with an eye towards sustainable development.

142. See discussion *infra* Part IV.B.3.

143. See Christopher D. Stone, *Should Trees Have Standing?—Toward Legal Rights for Natural Objects*, 45 S. CAL. L. REV. 450, 450 (1972).

144. See *id.* at 450, 452, 456 (arguing that the framework for legal rights for the environment already exists through other instances in which legal rights were created).

145. See Gwendolyn J. Gordon, *Environmental Personhood*, 43 COLUM. J. ENVTL. L. 49, 53 (2018) (tracing shift to recognizing rights for natural objects).

146. See *id.*

147. See REPUBLICA DEL ECUADOR, CONSTITUCIONES DE 2008 [REPUBLIC OF ECUADOR CONSTITUTION OF 2008], Oct. 20, 2008 [hereinafter CONST. OF ECUADOR] (granting the right to exist and rights to maintenance, structure, functions, and evolutionary process to nature as a whole); *cf.* Te Urewara Act 2014, subs 3, s 11 (N.Z.) (granting rights equivalent to a person to Te Urewara, a national park).

III. ANALYSIS

A. DUE DILIGENCE

Brazil is violating its due diligence obligations.¹⁴⁸ Whether a State has complied with its due diligence requirements is a paramount question.¹⁴⁹ Explicit in a violation of the no-harm rule is that the State *knowingly* caused a *transboundary* harm.¹⁵⁰ Of course, a State has a sovereign right to exploit its natural resources.¹⁵¹ Brazil is exercising that right.¹⁵² However, a State's compliance with due diligence obligations ensures that if a national activity had the potential to cause a transboundary harm, the State either prevented transboundary harm or sought to avoid it as much as possible.¹⁵³ Because Brazil is not adapting measures and rules to ensure that development of the Amazon Rainforest does not accelerate the timeline for a dieback scenario, it is not meeting its due diligence requirements.¹⁵⁴

1. *Due Diligence Under Customary International Law*

Brazil is under an obligation to ensure it has done its due diligence for any activity.¹⁵⁵ A threshold question to liability under international

148. See *infra* Part III.A.4.

149. See ILC Draft Articles, *supra* note 62, art. 3, cmt., ¶ 7 (“The duty of due diligence involved, however, is not intended to guarantee that significant harm be totally prevented, if it is not possible to do so. In that eventuality, the State of origin is required, as noted above, to exert its best possible efforts to minimize the risk. In this sense, it does not guarantee that the harm would not occur.”).

150. *Accord Pulp Mills on River Uruguay* (Arg. v. Uru.), 2010 I.C.J. 14, ¶ 101 (Apr. 20); *Corfu Channel* (U.K. v. Alb.), Judgment, 1949 I.C.J. 4, 22 (Apr. 9); *Trail Smelter* (U.S. v. Can.), 3 R.I.A.A. 1905, 1965 (Ottawa Conv. 1941); *Lake Lanoux* (Fr. v. Spain) 24 R.I.A.A. 281, 304 (Arb. Trib. 1957).

151. See, e.g., CBD, *supra* note 9, art. 3.

152. See Tatianna Bautzer, *Bolsonaro Says Criticism over Amazon Interferes with Brazil's Sovereignty*, REUTERS (Aug. 22, 2019), <https://www.reuters.com/article/us-brazil-environment-bolsonaro/bolsonaro-says-criticism-over-amazon-interferes-with-brazils-sovereignty-idUSKCN1VC2OD> (reporting on Bolsonaro's statement that the international community is “[interfering] with our sovereignty.”).

153. See *Pulp Mills*, 2010 I.C.J. at ¶ 101 (explaining due diligence as avoiding activities that would cause a significant transboundary harm).

154. See *infra* Part III.A.4.

155. See *Pulp Mills*, 2010 I.C.J. at ¶ 101 (requiring an EIA to be conducted only when there is an activity).

law is whether Brazil's actions constitute "activities."¹⁵⁶ Brazil's actions are likely "activities" so as to implicate the obligation to conduct due diligence.¹⁵⁷

i. Are Brazil's Actions "Activities"?

Brazil's national policies are activities. *Pulp Mills* instituted a requirement that an environmental impact assessment (EIA) be conducted for "activities which take place in its territory, or in any area under its jurisdiction, [that might cause] significant damage to the environment of another State."¹⁵⁸ Even under the more restrictive approach of only requiring an EIA for "projects," Brazil's national policies would still be implicated.¹⁵⁹ Similarly, soft-law sources also point to the requirement of an EIA for activities that have a risk of causing a transboundary harm.¹⁶⁰ Dictionary definitions of "activity"

156. *See id.*

157. *See infra* Part III.A.1.i.

158. *See Pulp Mills*, 2010 I.C.J. at ¶ 101.

159. *See* Alan Boyle, *Developments in the International Law of Environmental Impact Assessments and Their Relation to the Espoo Convention*, 20 REV. EUR. COMP. & INT'L ENVTL. L. 227, 227–28 (2011) (arguing that *Pulp Mills* requires EIAs for *projects*) (emphasis added). *Compare Project*, CAMBRIDGE ONLINE DICTIONARY, <https://dictionary.cambridge.org/us/dictionary/english/project> ("[A] piece of planned work or activity that is completed over a period of time and intended to achieve a particular aim."), *with Project*, OXFORD ADVANCED LEARNER'S DICTIONARY, https://www.oxfordlearnersdictionaries.com/us/definition/english/project_1?q=project (last visited on Mar. 28, 2020) ("[A] planned piece of work that is designed to find information about something, to produce something new, or to improve something."), *and Project*, MERRIAM-WEBSTER ONLINE DICTIONARY, <https://www.merriam-webster.com/dictionary/project> (last visited on Mar. 28, 2020) ("[A] specific plan or design.").

160. *See* ILC Draft Articles, *supra* note 62, art. 7 ("Any decision in respect of the authorization of an *activity* within the scope of the present articles shall, in particular, be based on an assessment of the possible transboundary harm caused by *that activity*, including any *environmental impact assessment*.") (emphasis added). Both the hard-law and soft-law approach contemplates that the activities may not be the government's activities but *any* activities under the control or *within the jurisdiction* of the State of origin. *See Pulp Mills*, 2010 I.C.J., ¶ 101 ("[A]ctivities which take place in its territory, or in any area under its jurisdiction."); *cf.* ILC Draft Articles, *supra* note 62, art. 7, cmt., ¶ 1 ("[The] [s]tate of origin, before granting authorization to operators to undertake activities . . . should ensure that an assessment is undertaken of the risk of the activity causing significant transboundary harm.")

contemplate national policies and programs as an “activity.”¹⁶¹ Therefore, Brazil’s national policies are “activities,” and would satisfy even more restrictive approaches.¹⁶²

2. *Due Diligence Under the CBD*

Brazil must carry out an EIA with respect to any programs and policies it implements under the CBD.¹⁶³ CBD Article 14 provides the different actions that require an EIA.¹⁶⁴ CBD Article 14 provides “Each contracting party, as far as possible and as appropriate, shall . . . [i]ntroduce appropriate arrangements to ensure that the environmental consequences of its programmes and policies that are likely to have significant adverse impacts on biological diversity are duly taken into account.”¹⁶⁵ Therefore, Brazil must carry out an EIA with respect to its national legislation and Bolsonaro’s own policies.¹⁶⁶

3. *Requirements of Re-Evaluation*

Brazil may be failing its requirements to re-evaluate its legislation and policies as they age and as the threat of deforestation becomes more apparent.¹⁶⁷ Brazil came close to failing this requirement in the

161. *Compare Activity*, CAMBRIDGE ONLINE DICTIONARY, <https://dictionary.cambridge.org/us/dictionary/english/activity> (last visited on Mar. 28, 2020) (“[T]he doing of something, or something that you are doing, have done, or could do.”), *with Activity*, MERRIAM-WEBSTER ONLINE DICTIONARY, <https://www.merriam-webster.com/dictionary/activity> (last visited on Mar. 28, 2020) (“[T]he quality or state of being active: behavior or *actions* of a particular kind.”) (emphasis added), *and Activity*, OXFORD ADVANCED LEARNER’S DICTIONARY, <https://www.oxfordlearnersdictionaries.com/us/definition/english/activity> (“[A] thing that somebody does in order to achieve a particular aim.”).

162. *See supra* Part III.A.1.i.

163. *See* CBD, *supra* note 9, art. 14(1)(b).

164. *See id.* art. 14 (requiring EIAs for both projects and activities). The differentiation of projects and activities in the CBD is not important to the analysis of whether Brazil’s policies are activities under customary international law because customary international law looks at activities within the jurisdiction of the State of origin. *See supra* Part III.A.1.i.

165. CBD, *supra* note 9, art. 14(1)(b).

166. *See id.*

167. *See* Pulp Mills on River Uruguay (Arg. v. Uru.), 2010 I.C.J. 14, ¶ 101 (Apr. 20) (“Moreover once operations have started and, where necessary, throughout the life of the project, continuous monitoring of its effects on the environment shall be

summer of 2019, when Bolsonaro fired the director of INPE.¹⁶⁸ INPE has since continued to monitor deforestation, but observers' doubts linger on how long INPE's monitoring will continue.¹⁶⁹

4. Requirement to Adopt Appropriate Rules and Measures

Brazil is failing to adopt appropriate rules and measures to prevent deforestation, and therefore is failing its due diligence obligations.¹⁷⁰ Similarly, the CBD requires parties to make "appropriate arrangements" in satisfying due diligence requirements.¹⁷¹ State conduct determines whether a State is adopting appropriate rules and measures.¹⁷² Similarly, due diligence requirements can be properly met even if there is a resulting transboundary harm.¹⁷³ Brazil's conduct

undertaken.").

168. Dom Phillips, *Brazil Space Institute Director Sacked in Amazon Deforestation Row*, THE GUARDIAN (Aug. 2, 2019), <https://www.theguardian.com/world/2019/aug/02/brazil-space-institute-director-sacked-in-amazon-deforestation-row> (reporting on Bolsonaro's firing of the director of INPE's Director, who is responsible for monitoring deforestation and characterization of INPE's data as sensationalist).

169. See Rhett A. Butler, *Brazil's Satellite Agency Resumes Releasing Deforestation Data*, MONGABAY (Sept. 1, 2019), <https://news.mongabay.com/2019/09/brazils-satellite-agency-resumes-releasing-deforestation-data/> (reporting that INPE has resumed monitoring after a two-month hiatus); Jenny Gonzalez, *Brazil Adds Deforestation Monitoring for All Biomes, so Long as Money Lasts*, MONGABAY (Nov. 14, 2019), <https://news.mongabay.com/2019/11/brazil-adds-deforestation-monitoring-for-all-biomes-so-long-as-money-lasts/> (reporting Brazil will only continue to monitor deforestation if it continues to receive funds from the Green Climate Fund).

170. See *Pulp Mills*, 2010 I.C.J., ¶ 197 (examining due diligence in the context of the Statute of the River Uruguay); discussion *infra* Part III.D.

171. See CBD, *supra* note 9 art. 14(1)(b) (obligating parties to take into account and arrange for policies that are likely to have significant environmental consequences in terms of biodiversity).

172. This is the soft-law approach. See ILC Draft Articles, *supra* note 62, art. 3, cmt., ¶ 7 ("The obligation of the State of origin to take preventive or minimization measures is one of due diligence. It is the conduct of the State of origin that will determine whether the State has complied with its obligation under the present articles.").

173. See *id.* ("The duty of due diligence involved, however, is not intended to guarantee that significant harm be totally prevented, if it is not possible to do so. In that eventuality, the State of origin is required, as noted above, to exert its best possible efforts to minimize the risk. In this sense, it does not guarantee that the harm would not occur.").

is not seeking to avoid or prevent a dieback scenario.¹⁷⁴ Rather, Brazil's current conduct is accelerating the timeline for a dieback scenario.¹⁷⁵

B. THE NO-HARM RULE'S APPLICATION

CBD Article 3 embodies the no-harm rule.¹⁷⁶ The no-harm rule takes primacy over State sovereignty because the CBD is a binding legal agreement.¹⁷⁷ The ICJ and ILC have reiterated the no-harm rule through several decisions and the draft articles on transboundary harm, respectively.¹⁷⁸ Therefore, Brazil's national legislation and policy with respect to CBD must not damage the environment of areas outside of its jurisdiction.¹⁷⁹

1. *The No-Harm Rule's Application to the Brazilian Amazon*

The no-harm rule applies to trees in the Brazilian Amazon because the CBD applies to all components of biodiversity within national jurisdiction.¹⁸⁰ Trees are a component of biodiversity under the CBD because they are a "biotic component of [an] ecosystem with actual or potential use or value to humanity," and so is the Amazon Rainforest ecosystem.¹⁸¹ Approaching the issue through the lens of an ecosystem,

174. See discussion *infra* Part III.D.

175. See discussion *infra* Part III.D.

176. See CBD, *supra* note 9, art. 3 (discussing the no-harm rule).

177. See Tinker, *supra* note 70, at 203–04 (describing the limiting nature of the no-harm rule on a State's sovereign right to exploit its natural resources).

178. See, e.g., Pulp Mills on River Uruguay (Arg. v. Uru.), 2010 I.C.J. 14, ¶ 101 (articulating the no-harm rule) (quoting Corfu Channel (U.K. v. Alb.), Judgment, 1949 I.C.J. 4, 22 (Apr. 9)); ILC Draft Articles, *supra* note 62, at 149–51 (discussing legality of action, territorial links, risk, and physical links in the context of transboundary harm).

179. See ILC Draft Articles, *supra* note 62, at 149–51 (describing how legal actions can rise to transboundary harm); Tinker, *supra* note 70, at 203–04 (resolving tension in the CBD's article 3).

180. See CBD, *supra* note 9, art. 4 (explaining jurisdictional scope of the CBD with respect to components of biological diversity).

181. See *id.* arts. 2, 4 (including ecosystems and species within the definition of biodiversity and applying the CBD to components of biodiversity within national jurisdiction); Nepstad, *supra* note 22, at 1737 (discussing ecosystem services); see also *Component* OXFORD ADVANCED LEARNER'S DICTIONARY, https://www.oxfordlearnersdictionaries.com/us/definition/english/component_1?q=component (last visited on Mar. 28, 2020) ("[O]ne of several parts of which

unusually high deforestation-driven tree mortality in Brazil could violate the no-harm rule because it would lead to a long-term decline in the Amazon Rainforest's ecosystem biodiversity, thus damaging more than just Brazil's environment.¹⁸²

2. *The No-Harm Rule's Application to Brazil's Forest Management Policies*

The no-harm rule also applies to Brazil's forest management policies. The CBD applies the no-harm rule to "programmes and policies", and customary international law applies the no-harm rule to "activities" and "projects."¹⁸³ Brazil's forest management policies fit within the framework of "activities" or "projects."¹⁸⁴ Brazil's forest management policies are also "programmes or policies."¹⁸⁵ That Brazil is not actually cutting down the Amazon Rainforest, rather private parties are, is immaterial.¹⁸⁶ The private parties are under Brazil's

something is made."); *Component*, CAMBRIDGE ONLINE DICTIONARY, <https://dictionary.cambridge.org/us/dictionary/english/component> (last visited on Mar. 28, 2020) ("[O]ne of the parts of a system, process, or machine."); *Component*, MERRIAM-WEBSTER ONLINE DICTIONARY, <https://www.merriam-webster.com/dictionary/component> (last visited on Mar. 28, 2020) ("[A] constituent part.").

182. See CBD, *supra* note 9, art. 2, ¶ 16 (defining sustainable use as using components of biodiversity in a manner that does not lead to long-term decline of biodiversity).

183. See *id.* art. 14(1)(b) (obligating parties to "introduce appropriate arrangements to ensure that the environmental consequences of its *programmes and policies* that are likely to have significant adverse impacts on biological diversity are duly taken into account") (emphasis added); see also ILC Draft Articles, *supra* note 62, art. 3, cmt., ¶ 7 (discussing territorial links).

184. See *supra* Part III.A.1.i (discussing whether Brazil's forest management policies could be considered "activities" and would fit within the more restrictive "projects" application).

185. See CBD, *supra* note 9, art. 14(1)(b) (obligating parties to take into account and arrange for policies that are likely to have significant environmental consequences in terms of biodiversity).

186. Both hard-law sources and soft-law sources contemplate that it is not only the State's activities that implicate the no-harm rule but also those of actors within the jurisdiction and control of the State. See *Corfu Channel* (U.K. v. Alb.) 1949 I.C.J. 4, 22 (Apr. 9) (assigning liability to Albania even if Albania did not order or place mines in its waters because Albania must have *known* that the mines were placed there) (emphasis added); *Pulp Mills on River Uruguay* (Arg. v. Uru.), 2010 I.C.J. 14, ¶ 101 (Apr. 20) ("It is 'every State's obligation *not to allow knowingly its territory to be used* for acts contrary to the rights of other States.'") (emphasis

jurisdiction and control.¹⁸⁷ Therefore, the no-harm rule under both the CBD and customary international law applies to Brazil's forest management policies.¹⁸⁸

C. THE DIEBACK SCENARIO AS A TRANSBOUNDARY HARM

The dieback scenario is a transboundary harm. The Amazon Rainforest dieback is similar to fires in Indonesia in 1997 and 1998 and the Aral Sea, which the CBD recognizes as transboundary harms.¹⁸⁹ The activities and processes carried out in these case studies are either actual deforestation or a functionally similar process.¹⁹⁰ Like the Soviet Union developed a plan to turn the Aral Sea region into its agricultural stronghold, Brazil's forest policies are allowing

added); ILC Draft Articles, *supra* note 62, art. 7, cmt., ¶ 1 (“Under article 7, a State of origin, before granting authorization to operators to undertake activities referred to in article 1, should ensure that an assessment is undertaken of the risk of the activity causing significant transboundary harm.”).

187. See CBD, *supra* note 9, art. 3 (discussing the use of State sovereignty to exploit resources); ILC Draft Articles, *supra* note 62, at 149–151 (legality of action and territorial link).

188. See cases cited *supra* note 186 (showing court contemplation that both State activities, as well as the activities of actors under the control of the State, implicate the no-harm rule); CBD, *supra* note 9, art. 14(1)(b) (obligating parties to take into account and arrange for policies that are likely to have significant environmental consequences in terms of biodiversity).

189. Compare *Summary of Transboundary Environmental Damage*, *supra* note 77, ¶¶ 46–47 (recognizing significant quantities of CO₂, habitat destruction, and extinction of certain species as a transboundary environmental harm), with Kumar, *supra* note 82, at 3799–3800 (recognizing high levels of salinity leading to all but the extinction of fish in the Aral Sea, and the decrease in efficacy of the Aral Sea's temperature control function to Siberia as a transboundary environmental harm), and Nepstad, *supra* note 22, at 1737, 1739 (arguing land-use changes will undermine ecological services provided by the Amazon Rainforest).

190. Irrigation is functionally similar to deforestation because many of the same impacts are present. Compare Levine, *supra* note 79, at 1 (“The vast majority of wildfires are intentionally set fires in forests, savannas, grasslands and other wildland areas for timber harvesting, *land conversion*, slash-and-burn *agriculture*, and socio-economic conflicts over questions of property and land use rights. In recent years extended droughts, together with the rapidly expanding exploitation of tropical forests and the demand for the conversion of forests to other land uses, have resulted in a dramatic increase in wildfire size, frequency and related environmental impacts.”) (emphasis added), with Kumar, *supra* note 82, at 3798–3800 (describing the intentional development of the Aral Sea for agricultural use and the resulting consequences from the exploitation of the Aral Sea such as increased salinity, declining fish catches, and meteorological changes as far as Siberia).

development in the Amazon Rainforest for economic gain, even if it is private parties developing the Amazon Rainforest and not the government.¹⁹¹ Similarly, the Indonesian forest fires recognizes a transboundary harm even if private parties caused the harm.¹⁹² Like both the Aral Sea and the Indonesian forest fires, the Amazon Rainforest dieback scenario is comprised of various feedback loops which work in concert to cause transboundary damage.¹⁹³

D. BRAZIL'S FOREST MANAGEMENT POLICIES VIOLATE THE NO-HARM RULE BY ACCELERATING THE DIEBACK SCENARIO

1. *The 2012 Forest Code Violates the CBD's No-Harm Rule*

The 2012 Forest Code violates the no-harm rule because it encourages deforestation and grants amnesty from reforestation efforts, thereby eroding protections necessary to prevent a dieback scenario.¹⁹⁴ Three provisions of the 2012 Forest Code are particularly supportive of deforestation.¹⁹⁵ First, Brazil has decentralized its forest management and given more latitude to States to decide how to

191. See Kumar, *supra* note 82, at 3798 (noting Soviet economic expansion as the cause of increased salinity and decreased water levels of the Aral Sea). Again, the fact that private parties are developing the Amazon Rainforest is immaterial to the transboundary harm analysis. See discussion *supra* Part III.B.2 (arguing Brazil's forest management policies implicate the no-harm rule regardless of whether private parties are responsible for deforestation because hard- and soft-law care only if the actions are within the jurisdiction and control of the State of origin).

192. See Levine, *supra* note 79, at 1 (noting forest clearing for land-use changes as a primary driver for forest fires causing transboundary harm).

193. Compare Nepstad, *supra* note 22, at 1739 (arguing land-use changes create kindling for forest fires making the Amazon Rainforest more susceptible to fires in times of severe drought), with Kumar, *supra* note 82, at 3800 (observing climate change in combination with the Aral Sea's climate regulation services has led to shorter dry seasons and summers and to longer and colder winters), and Levine, *supra* note 79, at 2 (noting deforestation-driven climate change through releases of "carbon dioxide, carbon monoxide, methane, nitric oxide, tropospheric ozone, methyl chloride and elemental carbon particulates.").

194. See Forest Code, ch. II(I), art. 4 (discussing preservation area demarcations); *id.* ch. IV(I) art. 12 ¶ 5 (discussing legal reserve area reductions); *id.* ch. XIII (II) art. 61(b) (discussing the amnesty provision); see also Rink, *supra* note 111, at 43 (characterizing the 2012 Forest Code antagonistic to forest protections, despite some progressive policies).

195. See *supra* note 193 and accompanying text.

demarcate preservation areas.¹⁹⁶ Second, the 2012 Forest Code allows States, in certain circumstances, to reduce the size of legal reserve areas.¹⁹⁷ Finally, the 2012 Forest Code granted amnesty from land restoration to many landowners.¹⁹⁸

i. Contribution to Deforestation by the Decentralization of Forest Management and Reduction of Legal Reserve Areas

The decentralization of forest management will continue to increase overall deforestation rates.¹⁹⁹ 2012 marked the lowest rate of deforestation in Brazil, at approximately 4,600 square kilometers of clearing.²⁰⁰ Deforestation, however, has increased since Brazil implemented the 2012 Forest Code, rising to 7,500 square kilometers in 2018 and most likely surpassing 10,000 square kilometers in 2019.²⁰¹ INPE has already found that deforestation in the month of

196. See Forest Code, ch. II(I), arts. 4, 6, 8 (discussing preservation area demarcations and role of State government in demarcation); Castelo, *supra* note 127, at 219–20 (detailing the 2012 Forest Code’s provision for decentralization of forest management by allowing Brazilian States more freedom in determining delineation standards for APPs according to those State’s “interests and needs.”)

197. See Forest Code, ch. IV(I) art. 12 ¶ 5 (discussing legal reserve area reductions); Azevedo & Reis, *supra* note 129, at 39 (noting that if a State has its ecological and economic zoning plan approved, and conservation units of public domain and/or indigenous constitute more than 65% of its territory, which States in the Amazon would meet, then the threshold for Legal Reserve lands would be reduced to 50%)

198. See Forest Code, ch. XIII(II), art. 61(b) (discussing the amnesty provision); Britaldo Soares-Filho et al., *Cracking Brazil’s Forest Code*, 344 SCI. MAG. 363, 363 (2014) (estimating that the amnesty provision reduces total land needing to be restored from 50,000,000 hectares to 21,000,000 hectares).

199. Historically, Brazil has strongly managed deforestation, but leaving more decisions in the hands of individual States will likely increase deforestation as States may have a particularized economic need not felt on Brazil as a whole. See Forest Code, ch. II(I), arts. 4, 6, 8 (discussing preservation area demarcations and role of State government in demarcation); Castelo, *supra* note 127, at 219–20 (arguing the ability to demarcate preservation areas according to “interests and needs” would allow States to adjust preservation areas so as not to recover and restore degraded and reduced riparian forests around rivers).

200. See *Deforestation-Driven Gross Emissions (Old Growth Forests)*, INSTITUTO NACIONAL DE PESQUISAS ESPACIAIS, <http://inpe-em.ccst.inpe.br/en/deforestation-driven-gross-emissions-old-growth-forests-amz/> (last visited Oct. 26, 2019) (showing long-term increase in deforestation since 2012).

201. See *id.*; Jonathan Watts, *Amazon Rainforest Fires: Global Leaders Urged to Divert Brazil from ‘Suicide’ Path*, THE GUARDIAN (Aug. 23, 2019),

August 2019 has increased by 222% from the rate in the month of August 2018.²⁰²

The reduction in legal reserve areas will lead to a transboundary harm if implemented by States.²⁰³ Implementation of legal reserve reductions in eligible States could result in the deforestation of millions of hectares.²⁰⁴ The effect of clearing millions of hectares would be damaging to biodiversity within the Brazilian Amazon and the greater Amazon Forest due to aggravation of drought and habitat degradation and losses in carbon storage of positive feedback loops.²⁰⁵ Some now place the tipping point for a dieback scenario as early as 2021; though, others believe that is a pessimistic view.²⁰⁶

ii. Contribution to Deforestation by the Amnesty Provision

Under the amnesty provision, some 29,000,000 hectares will no longer have to be restored.²⁰⁷ Scientists modeling the dieback scenario estimate that the tipping point will occur at around twenty to twenty-

<https://www.theguardian.com/environment/2019/aug/23/amazon-fires-global-leaders-urged-divert-brazil-suicide-path> (finding deforestation increase of twenty to thirty percent likely in 2019 from previous years and forecasting the deforestation of approximately 10,000 square-kilometers for the first time in ten years).

202. See *Deforestation of Brazilian Amazon Grew by 222 Percent in August*, AGENCIA EFE (Sept. 9, 2019), <https://www.efe.com/efe/english/life/deforestation-of-brazilian-amazon-grew-by-222-percent-in-august/50000263-4059530> (noting the Brazilian Amazon lost approximately 1,700 square kilometers in August 2019).

203. See Lovejoy & Nobre, *supra* note 26 (estimating dieback at twenty to twenty-five percent); Azevedo & Reis, *supra* note 129, at 39 (describing circumstances in which States could reduce legal reserve areas from eighty percent to fifty percent).

204. See Forest Code, ch. IV(I), art. 12, ¶ 5 (discussing legal reserve area reductions); Azevedo & Reis, *supra* note 129, at 39 (noting the possibility for reductions in Legal Reserve areas from eighty percent to fifty percent in certain circumstances).

205. See Nepstad, *supra* note 22, at 1739–40 (describing the effect of rising sea temperatures on rainfall and drying in the Amazon in combination with fire-based clearing for land-use changes and logging).

206. See *Brazilian Deforestation Roars Ahead as Amazon Fires in 2019 Die Down*, NATURE WORLD NEWS (Oct. 24, 2019), <https://www.natureworldnews.com/articles/42372/20191024/brazilian-deforestation-roars-ahead-amazon-fires-2019-dies-down.htm> (describing Monica De Bolle's prediction for a 2021 dieback scenario and responses to the prediction).

207. See Forest Code, ch. XIII(II), art. 61(b) (discussing the amnesty provision); Soares-Filho, *supra* note 198, at 363 (estimating that the amnesty provision reduces total land needing to be restored from 50,000,000 hectares to 21,000,000 hectares).

five percent total deforestation.²⁰⁸ Currently, the Amazon Rainforest is at seventeen percent deforestation.²⁰⁹ Restoration of 29,000,000 hectares would reduce total deforestation by five percent to a more manageable twelve percent total deforestation.²¹⁰ Brazil has pledged to the international community that it will reforest millions of hectares, but under Bolsonaro this seems unlikely as deforestation rates continue to rise.²¹¹ With a small margin of safety, the Amazon Rainforest is near the tipping point.²¹²

iii. Transboundary Consequences of the 2012 Forest Code

The 2012 Forest Code violates the no-harm rule under the CBD and customary international law because increased deforestation will lead to species extinction.²¹³ Thousands of fish species that rely on the Amazon River Basin are already threatened by forest fires.²¹⁴ Additionally, the forest fires are stressing 265 endangered species, of which 124 are endemic to the Amazon Rainforest.²¹⁵ Moreover, the dieback scenario will lead to savannization of the Amazon Rainforest.²¹⁶ Savannization will lead to massive biodiversity loss as

208. See Lovejoy & Nobre, *supra* note 26 (estimating occurrence of a dieback scenario).

209. See *id.*

210. See *id.* (noting current deforestation at seventeen percent); Soares-Filho, *supra* note 198, at 363 (discussing the impacts of the amnesty provision).

211. See *Intended Nationally Determined Contribution*, FEDERATIVE REPUBLIC OF BRAZIL 3 (Sept. 21, 2016), <http://www4.unfccc.int/ndcregistry/PublishedDocuments/Brazil%20First/BRAZIL%20iNDC%20english%20FINAL.pdf> (promising to reforest twelve million hectares).

212. See Lovejoy & Nobre, *supra* note 26 (discussing dieback estimation).

213. See Michael S. Giaimo, *Deforestation in Brazil: Domestic Political Imperative – Global Ecological Disaster*, 18 ENVTL. L. REV. 537, 539 (1988) (“Since about fifty percent of the world’s plant and animal species are restricted to the two percent of the earth that is rain forest, any sizeable deforestation extinguishes species with potential to serve as new sources of food, pest control, pharmaceuticals, and fuel.”)

214. Stefan Lovgren, *Amazon Fish Species at Risk if Fires Destroy River Habitat*, NAT’L GEOGRAPHIC (Sept. 13, 2019), <https://www.nationalgeographic.com/environment/2019/09/amazon-fires-brazil-threaten-fish/>.

215. See Shivali Best, *supra* note 79 (including species such as the giant armadillo, the white-lipped peccary, and the giant anteater).

216. See Divino V. Silverio et al., *Testing the Amazon Savannization Hypothesis*:

the Amazon Rainforest ecosystem will no longer be able to support the many species that depend on its tropical climate.²¹⁷

The 2012 Forest Code violates the no-harm rule under the CBD and customary international law because increased deforestation will induce droughts in other States.²¹⁸ Increased deforestation will impact the Amazon Rainforest's hydrological cycle, affecting rainfall not only in the Brazilian Amazon or the Amazon Rainforest as a whole, but also as far away as the United States.²¹⁹ Drought is a primary driver for deforestation.²²⁰ Deforestation increases the vulnerability of species reliant on the Amazon Rainforest, and thus, deforestation in the Brazilian Amazon therefore endangers the survival of many species.²²¹

Fire Effects on Invasion of a Neotropical Forest by Native Cerrado and Exotic Pasture Grasses, 368 PHIL. TRANS. R. SOC. B 6 (2013) (finding intense forest fires can lead to grass invasion, which will replace large parts of the Amazon Rainforest with grasslands and noting that given the increased rate of forest fires many of these forest areas will permanently transition to grasslands).

217. See Carlos A. Nobre et al., *Land-use and Climate Change Risks in the Amazon and the Need of a Novel Sustainable Development Paradigm*, 113 PNAS 10759, 10763 (2016) (depending on the scale, these changes could ultimately drive changes in the local climate, pushing the ecosystem toward a different forest-climate equilibrium state, that is, the one where most of the tropical forests in southern, southwestern, and southeastern Amazon are replaced by degraded savannas as predicted by models) (internal citations omitted).

218. See *Summary of Transboundary Environmental Damage*, *supra* note 77, ¶¶ 46–47 (noting droughts caused by forest fires in Indonesia and irresponsible irrigation in the Aral Sea Basin were transboundary harms).

219. See Lovejoy & Nobre, *supra* note 26 (noting air masses carry rainfall westward from the Atlantic Ocean); Mike Bettwy, *Tropical Deforestation Affects Rainfall in the U.S. and Around the Globe*, NASA (Sept. 13, 2005), https://www.nasa.gov/centers/goddard/news/topstory/2005/deforest_rainfall.html (finding deforestation in the Amazon Rainforest could lead to droughts in Texas and the Midwest).

220. See Nobre et al., *supra* note 217, at 10762, 10765 (arguing drought-induced deforestation will lead to massive biodiversity loss because it will increase the vulnerability large trees, which are critical to the function and maintenance of the Amazon Rainforest, and concluding that deforestation must be reduced to essentially zero to save the Amazon Rainforest's biodiversity).

221. See Simon L. Lewis, *Tropical Forests and the Changing Earth System*, 361 PHIL. TRANS. R. SOC. B 195, 201, 204 (arguing reduced rainfall can transform tropical rainforests into savanna systems causing habitat degradation for even those species that do not need to be conserved, and estimating that approximately humans have caused one million species to be “committed to extinction.”).

2. *Bolsonaro's Weakening of Government Agencies violates the CBD's No-Harm Rule*

President Bolsonaro's policies with respect to Brazilian environmental agencies violates the no-harm rule under the CBD and customary international law because these policies are encouraging deforestation and accelerating a dieback scenario.²²² Bolsonaro's policies are legal in international law and within Brazil's jurisdiction and control because the CBD allows Brazil to exploit its natural resources and because Bolsonaro is directing the policy.²²³

Bolsonaro's actions with respect to agencies are causing a transboundary harm.²²⁴ Bolsonaro has frozen twenty-three percent of the funds of IBAMA—Brazil's environmental agency—which led to significant reductions in fire prevention.²²⁵ IBAMA now has approximately 1.2 million dollars left to fight forest fires in the Brazilian Amazon.²²⁶ According to the environmental group MapBiomas, no new fire prevention measures have been implemented since the conclusion of the 2019 fire season and in the run-up to the 2020 fire season.²²⁷

This reduction in capacity to prevent and fight forest fires is placing fish species at risk in the greater Amazon Rainforest.²²⁸ The CBD recognizes that this type of biodiversity loss would be a transboundary

222. See CBD, *supra* note 9, art. 3 (discussing the no-harm rule); see also ILC Draft Articles, *supra* note 62, art. 1, cmt. ¶¶ 16–17 (examining risk and physical link between State action and the resulting harm).

223. See CBD, *supra* note 9, art. 3 (discussing the no-harm rule).

224. See Lovgren, *supra* note 214 (noting impacts of lessened protections for flood plains combined with increased forest fires have the potential to destroy habitats for fish species); Yeung, *supra* note 98 (reporting significant increases in respiratory-related illnesses caused by smoke emissions from forest fires in nearby Brazilian towns and also in Colombia, Peru, Bolivia, and Paraguay).

225. See Joe Sandler Clarke, *Jair Bolsonaro's Government Blocked Funding for Fire Prevention*, GREENPEACE (Sept. 17, 2019), <https://unearthed.greenpeace.org/2019/09/17/jair-bolsonaro-amazon-fires-ibama-icmbio/> (analyzing Ibama's budget in the context of a memo freezing fire prevention funds and Bolsonaro's freezing of 23% of Ibama's budget).

226. See *id.* (noting this was a price of five million Brazilian Reals).

227. *Brazil to Create "Amazon Council" to Protect and Develop Forest*, AL JAZEERA (Jan. 21, 2020), <https://www.aljazeera.com/news/2020/01/brazil-create-amazon-council-protect-develop-forest-200121172221619.html>.

228. See Lovgren, *supra* note 214.

harm.²²⁹ Related to the Indonesian fires case study, lack of adequate fire prevention funding has also caused transboundary harm to children not only within Brazil but also other Amazonian and South American countries.²³⁰ Bolsonaro could reasonably foresee that reducing fire prevention funds would lead to increased deforestation due to forest fires.²³¹

3. Decree No. 9759/2019 Violates the CBD's No-Harm Rule

Presidential Decree No. 9759/2019, which disbanded all committees governing the Amazon Fund, violates the no-harm rule under CBD and customary international law.²³² Presidential Decree No. 9759/2019 is a legal action in international law and within Brazil's jurisdiction and control because the CBD allows for the policy and Bolsonaro instituted it.²³³

Presidential Decree No. 9759/2019 is causing a transboundary harm because the Amazon Fund's collapse will lead to increased reliance on deforestation for economic gain.²³⁴ Disbanding these committees will cause the Amazon Fund to collapse because funds will have to be

229. See *Summary of Transboundary Environmental Damage*, *supra* note 77, ¶ 47 (describing the 1997 and 1998 Indonesian forest fires' destruction of species habitats); Levine, *supra* note 79, at 10–11 (noting forest fire impact on habitat destruction leading to losses of vulnerable animal species).

230. See Yeung, *supra* note 98; Levine, *supra* note 79, at 12 (describing impacts of smoke emissions from forest fires on increased incidents of asthma hospitalizations).

231. See Nepstad, *supra* note 22, at 1739–40 (arguing increased occurrence and severity of droughts and deforestation has made forests more vulnerable to fires, thus increasing tree mortality); Rong Fu et al., *Increased Dry-Season Length Over Southern Amazonia in Recent Decades and Its Implication for Future Climate Projection*, 110 PNAS 18110, 18111 (examining main dry-season from August to October); Clarke, *supra* note 225 (reporting a fire prevention funding freeze in August).

232. *What is the Amazon Fund?*, *supra* note 137.

233. See *id.*; see also CBD, *supra* note 9, art. 3 (discussing the no-harm rule).

234. See de Bolle, *Amazon Rainforest Hearing*, *supra* note 7, at 6 (arguing forest conservation through the Amazon Fund provides economic benefits to farmers and people residing in the Brazilian Amazon by creating jobs and increasing value of land); Nepstad, *supra* note 22, at 1739 (describing synergy between land-use drive deforestation and a dieback scenario); see also ILC Draft Articles, *supra* note 62, art. 1, cmt. ¶¶ 13–15 (finding in favor of transboundary harm when an activity involves an inherent and significant risk of transboundary harm).

returned to donors.²³⁵ Yet, subsidizing farmers through the Amazon Fund could support the economic welfare of locals without causing a transboundary harm as there is economic value to conservation of the Amazon Rainforest because of its carbon storage potential.²³⁶

Inadequate financing for farming subsidies and reforestation efforts accelerate a dieback scenario.²³⁷ The Aral Sea case study provides some insight because the same concerns for economic welfare are at issue.²³⁸ The Soviet Union used the Aral Sea to develop an expansive irrigation network for cotton production.²³⁹ The Aral Sea's ecological problems are also similar to deforestation in the Brazilian Amazon with compounding environmental and societal factors driving more intensive ecological change.²⁴⁰ Aral Sea development caused increased water salinity and significantly decreased water levels.²⁴¹ However, economic concerns have slowed Aral Sea restoration progress.²⁴² Brazil has essentially the same problem, but it also has an opportunity to make economic use out of conservation through the Amazon Fund; it can prevent a dieback scenario.²⁴³

235. Lefteris Karagiannopoulos, *Norway Stops Amazon Fund Contribution in Dispute with Brazil*, REUTERS (Aug. 15, 2019), <https://www.reuters.com/article/us-brazil-environment-norway/norway-stops-amazon-fund-contribution-in-dispute-with-brazil-idUSKCNI152C9>.

236. See de Bolle, *Amazon Rainforest Hearing*, *supra* note 7, at 6 (arguing a strengthened Amazon Fund could provide as many as 200 jobs per 1,000 hectares of land undergoing the recovery process); Nepstad, *supra* note 22, at 1739 (detailing the effects of selective logging on dieback); see also ILC Draft Articles, *supra* note 62, art. 1, cmt. ¶¶ 13–15 (discussing the inherent and significant risk of transboundary harm).

237. See de Bolle, *Amazon Rainforest Hearing*, *supra* note 7, at 6 (noting reliance on deforestation-drive activities by Brazilian citizens).

238. See *Summary of Transboundary Environmental Damage*, *supra* note 77, ¶ 46 (summarizing economic exploitation of the Aral Sea and consequences).

239. Kumar, *supra* note 82, at 3798.

240. See *id.* at 3798 (describing desertification of the Aral Sea through land-use and compounding factors leading to further desertification as Aral Sea continued to lose water); see also Nepstad, *supra* note 22, at 1739–40 (describing compounding factors of climate change and land-use conversion of forests leading to a dieback scenario).

241. See Kumar, at 3798 (noting agricultural development required more and more water causing increased salination).

242. See *id.* at 3801 (explaining slow progress in restoration due to concerns with the economic welfare of cotton farmers in the Aral Sea region).

243. See de Bolle, *Amazon Rainforest Hearing*, *supra* note 7, at 6 (describing

The ILC Draft Articles note that monetary policies are typically excluded from transboundary harm, but the subversion of the Amazon Fund satisfies the ILC Draft Articles' physical link criterion.²⁴⁴ It is reasonably foreseeable that reducing funding for projects in the Amazon Rainforest by hundreds of millions of dollars will lead to increased deforestation, similarly to how cutting fire prevention funding would.²⁴⁵

Alternatively, Presidential Decree No. 9759/2019 violates CBD Article 11.²⁴⁶ The Guidance Committee establishes the guidelines for which types of projects may receive funding and the requirements for receiving funding.²⁴⁷ The Technical Committee is responsible for validating the carbon emissions from deforestation every year to determine the amount of fund raising that can occur.²⁴⁸ By disbanding these committees, Bolsonaro is violating CBD Article 11 because he is actually disincentivizing investment as Norway and Germany have both frozen funds intended for the Amazon Fund.²⁴⁹

economic benefits of Amazon Rainforest conservation).

244. See ILC Draft Articles, *supra* note 62, at 151 (noting monetary policies are not usually manageable because there is no physical link and requiring that actions have transboundary *physical* consequences that in turn result in significant harm) (emphasis added).

245. Compare de Bolle, *Amazon Rainforest Hearing*, *supra* note 7, at 4 (noting five-hundred million dollars in the Amazon Fund have not been disbursed and the money in the Amazon Fund may have to be returned if Brazil continues its policy of deforestation), with Yeung, *supra* note 98 (reporting forest fire rates for September, 2019 were the lowest since 2013 likely because Bolsonaro's banned land-clearing fires for sixty days and sending in thousands of troops to combat the forest fires).

246. See CBD, *supra* note 9, art. 11 ("economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity.").

247. See Amazon Fund Guidance Committee (COFA), *supra* note 139 (stating the purpose of the Guidance Committee).

248. See Amazon Fund Technical Committee (CTFA), *supra* note 139 (stating the purpose of the Technical Committee).

249. See Karagiannopoulos, *supra* note 235 (detailing the freeze of distributions to Amazon Fund from Norway and Germany).

IV. RECOMMENDATIONS

A. ADDRESSING DEFORESTATION AND BRAZIL'S NATIONAL SOVEREIGNTY CONCERNS THROUGH A STRENGTHENED AMAZON FUND

Of the nearly one billion dollars currently in the Amazon Fund, about half has not been disbursed.²⁵⁰ If President Bolsonaro terminates the fund completely, then the money would be returned to the donating countries—currently only Norway and Germany.²⁵¹ Bolsonaro's intention to compensate farmers who lost their property on the grounds of noncompliance with the forest code has caused Norway, whose contributions constitute about ninety-five percent of the Amazon Fund, to freeze funding.²⁵²

A stronger Amazon Fund would be one in which more world powers contributed. For example, the G-7's offer of aid to Brazil should not be just a one-time offer, it should be a continual effort given the Amazon's importance to global biodiversity and the global environment in general.²⁵³ But increased participation needs to come with positive signaling from other countries; therefore, the international community's grievances with Brazil's deforestation resurgence may need to be put aside in order to foster cooperation.²⁵⁴ The additional benefit of using the Amazon Fund is that it is an existing mechanism for cooperation, and it would allow Bolsonaro to retain Brazil's national sovereignty as donations are utilized by Brazil as it wants.²⁵⁵ The danger is that funds would be under-utilized, or

250. See de Bolle, *Amazon Rainforest Hearing*, *supra* note 7, at 4 (detailing division and distribution of capital in the Amazon Fund).

251. See *id.*

252. Ailsa Chang, *Why Norway And Germany Have Frozen Money Going to the Amazon Fund*, NPR (Aug. 23, 2019), <https://www.npr.org/2019/08/23/753836508/why-norway-and-germany-have-frozen-money-going-to-the-amazon-fund> (reporting the division of capital paid into the Amazon Fund by Norway and Germany).

253. See de Bolle, *Amazon Rainforest Hearing*, *supra* note 7, at 6 (recommending the international community contribute to the Amazon Fund).

254. See *Project Document*, AMAZON FUND § 6.3 (Feb. 28, 2013), http://www.amazonfund.gov.br/export/sites/default/en/_galleries/documentos/amazon_fund/Amazon-Fund-Project_Document_MMA.pdf (describing the role of the Brazilian Development Bank as Fund Manager).

255. de Bolle, *Amazon Rainforest Hearing*, *supra* note 7, at 4, 6 (describing

rather Bolsonaro's economic aspirations may stand in the way. However, research indicated that as many as 200 jobs will be created for each 1,000 hectares of land recovered.²⁵⁶

The parties to the CBD could also address the Amazon Fund at the next Conference of the Parties. CBD, Article 21, paragraph 4 provides that "the Contracting Parties to the CBD shall consider strengthening existing financial institutions to provide financial resources for the conservation and sustainable use of biodiversity."²⁵⁷ CBD Article 11 also provides that "each Contracting Party shall, as far as possible and as appropriate, adopt economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity."²⁵⁸

B. LEGAL PERSONHOOD FOR THE AMAZON?

Legal Personhood may provide a way forward for strengthened protection and preservation of the Amazon. Several nations have already begun to recognize legal rights for natural objects, including the Amazon Rainforest.²⁵⁹

1. *New Zealand and the United States*

New Zealand and the United States both grant legal personhood to the environment in some respects, although neither country has a constitutional provision granting environmental personhood to nature as a whole. In New Zealand, the national government granted these rights.²⁶⁰ New Zealand's two grants were to Te Urewara, a protected area, and the Whanganui River.²⁶¹ The 2014 Te Urewara Act gives Te Urewara all the rights given to a legal person, with a board of governors exercising those rights on behalf of the protected area.²⁶²

Bolsonaro's aversion to foreign influence).

256. *See id.* (describing economic benefits of Amazon Rainforest conservation).

257. CBD, *supra* note 9, art. 21 ¶ 4.

258. *Id.* art. 11.

259. *See* discussion *infra* Parts IV.B.1, IV.B.2.

260. *See* Te Awa Tupua Act (Whanganui River Claims Settlement) 2017 (N.Z.) (enacted by the national government); Te Urewara Act, s 11 (enacted by the national government); Gordon, *supra* note 145, at 56.

261. Gordon, *supra* note 145, at 56–57.

262. Te Urewara Act, pt 1, subpt 3, s 11, subs 1.

Similarly, the New Zealand government also gave the Whanganui River the rights of a legal person, with the Te Pou Tupua acting as “the human face”²⁶³ of the Whanganui River.²⁶⁴

National efforts in the United States have created protections for air and water, but these protections are human-centric and certainly do not contemplate the environment in the same manner that New Zealand has with its legislation.²⁶⁵ However, local efforts have focused on granting actual rights to natural objects. For example, the citizens of Toledo, Ohio passed a referendum giving a bill of rights to Lake Erie.²⁶⁶ Lake Erie Bill of Rights § 1(a) provides “Lake Erie, and the Lake Erie watershed, possess the right to exist, flourish, and naturally evolve.”²⁶⁷

2. *Developments in Amazonian Countries*

With respect to the Amazon Rainforest, three countries in the Amazon Cooperation Treaty Organization have given the Amazon Rainforest²⁶⁸ legal personhood either indirectly or directly.²⁶⁹

263. Te Awa Tupua Act, pt 2, subpt 2, s 14, subs 1.

264. *Id.* pt 2, subpt 3, s 18, subs 2.

265. See Allison Katherine Athens, *An Indivisible and Living Whole: Do We Value Nature Enough to Grant It Personhood*, 45 *ECOLOGY L.Q.* 187, 190 (2018) (noting Congress did not intend to protect nature but rather to ensure that humans had access to clean water and air).

266. Sigal Samuel, *Lake Erie Now Has Legal Rights, Just Like You*, *VOX* (Feb. 26, 2019), <https://www.vox.com/future-perfect/2019/2/26/18241904/lake-erie-legal-rights-personhood-nature-environment-toledo-ohio> (reporting the passage of the groundbreaking legislation).

267. Lake Erie Bill of Rights, U. TOL. SCH. L., § 1(a) (2019), <https://www.utoledo.edu/law/academics/ligl/pdf/2019/Lake-Erie-Bill-of-Rights-GLWC-2019.pdf>.

268. See ACT, *supra* note 113, preamble (showing Ecuador, Bolivia, and Colombia as signatories).

269. See CONST. OF ECUADOR, ch. 7, art. 71; Ley de Derechos de la Madre Tierra [LAW OF THE RIGHTS OF MOTHER EARTH], Law 071, ch. III, art. 7 (Dec. 2010) (Bol.) (translated in *Law of Mother Earth the Rights of Our Planet a Vision From Bolivia*, WORLD FUTURE FUND, <http://www.worldfuturefund.org/Projects/Indicators/motherearthbolivia.html> [<https://perma.cc/9WKT-NZ4L>] (last visited Oct. 5, 2019)); Anastasia Moloney, *Colombia's Top Court Orders Government to Protect Amazon Forest in Landmark Case*, *REUTERS* (Apr. 6, 2018), <https://www.reuters.com/article/us-colombia-deforestation-amazon/colombias-top-court-orders-government-to-protect-amazon-forest-in-landmark-case-idUSKCN1HD21Y> (reporting the Colombia Supreme

Ecuadorian Constitution Chapter 7 Article 71 provides for the rights of nature and gives citizens the ability to sue on those rights.²⁷⁰ Litigants put this provision to the test in the Vilcabamba River Case.²⁷¹ In ruling for the Vilcabamba River, the court noted that the Ecuadorian Constitution gives rights to nature and that the expansion of a road altering the river's flow would violate those rights.²⁷² Similarly, Bolivia has also enacted legislation, Law of the Rights of Mother Earth, which gives rights to nature.²⁷³ However, Bolivia frames these rights and Mother Earth as a collective public interest.²⁷⁴

Colombia has directly addressed deforestation in litigation granting the Amazon Rainforest legal personhood.²⁷⁵ Young plaintiffs brought this case arguing that Amazon deforestation and the government's failure to prevent it violated their rights to a healthy environment.²⁷⁶ In its ruling, the Colombian Supreme Court recognized that the Amazon River Ecosystem was itself subject of rights.²⁷⁷

3. *Potential for Environmental Personhood in Brazil*

In Brazil, it may be difficult to adopt environmental personhood for the Amazon as expressed in the Ecuadorian Constitution, under Bolivian Law, and in Colombian precedent. Just six percent of the Amazon falls within Colombia's borders compared with sixty percent

Court's order requiring the Colombian Government to protect the Amazon forest).

270. See CONST. OF ECUADOR, ch. 7, art. 71.

271. See Maria Valeria Berros, *Defending Rivers: Vilcabamba in the South of Ecuador*, RCC PERSPECTIVES 37, 38 (2017) (suggesting that according to the new Ecuadorian Constitution the river itself has the right to its own natural course).

272. See *id.*

273. LAW OF THE RIGHTS OF MOTHER EARTH, ch. III, art. 7 (listing rights to life, biodiversity of life, water, clean air, equilibrium, restoration, and pollution-free living as rights belonging to Mother Earth).

274. See *id.* ch. II, art. 5.

275. See Moloney, *supra* note 269 (reporting on the Colombian Supreme Court's decision regarding personhood for the Amazon Rainforest).

276. See *id.*

277. Nicholas Bryner, *Colombian Supreme Court Recognizes Rights of the Amazon River Ecosystem*, INT'L UNION FOR CONSERVATION OF NATURE (Apr. 20, 2018), <https://www.iucn.org/news/world-commission-environmental-law/201804/colombian-supreme-court-recognizes-rights-amazon-river-ecosystem> (noting Colombian Supreme Court recognized rights in the Amazon River Ecosystem that the Colombian government is obligated to protect under the Colombian Constitution).

within Brazil's borders.²⁷⁸ Moreover, the Colombian rainforest constitutes approximately forty two percent of Colombia's size by land whereas the Brazilian rainforest constitutes approximately sixty percent of Brazil's size by land.²⁷⁹ Thus, a Brazilian Supreme Court decision granting personhood to the Brazilian Amazon would have further reaching impacts on Brazil. Considering that the Brazilian Supreme Court also upheld the 2012 Forest Code's constitutionality, it is doubtful that the Court would grant personhood rights to the Brazilian Amazon.²⁸⁰

International pressure may persuade the Court to change its reasoning.²⁸¹ New legislation or constitutional provisions recognizing personhood may be possible as Bolsonaro's main contention with the international community's narrative is on national sovereignty.²⁸² Three nations in the Amazon Basin already recognize personhood for the Amazon, establishing this precedent.²⁸³

278. See *Amazon Basin Forest*, *supra* note 7, (providing background information on Amazon Rainforest).

279. See *id.* (denoting division of the Amazon Rainforest between countries).

280. Sue Branford, *Brazil High Court Forest Code Ruling Largely Bad for Environment, Amazon: NGOs*, MONGABAY (Mar. 1, 2018), <https://news.mongabay.com/2018/03/brazil-high-court-forest-code-ruling-largely-bad-for-environment-amazon-ngos/> (stating that there was a 6-5 split on some important charges of unconstitutionality but a comfortable majority on other important charges); see also Jake Spring, *Brazil Court Upholds Forestry Law Changes in Blow to Environmentalists*, REUTERS (Feb. 28, 2019), <https://www.reuters.com/article/brazil-environment/brazil-court-upholds-forestry-law-changes-in-blow-to-environmentalists-idUSL4N1LV5BF> (reporting concerns that the Brazilian Supreme Court's upholding of certain provisions in the 2012 Forest Code creates a culture of deforestation).

281. See *Preserving the Amazon: A Shared Moral Imperative: Before the Subcomm. on the W. Hemisphere, Civilian Sec., and Trade of the H. Comm. on Foreign Affairs*, 116th Cong. 1 (2019) (statement of Daniel Nepstad, PhD, President and Executive Director of Earth Innovation Institute) (arguing that positive signaling from other nations, rather than the threat of sanctions would encourage a voluntary change in Brazil's forest management policy).

282. Marina Lopes, *Brazil's Bolsonaro Says He Might Accept G-7 Offer to Help Fight Amazon fires — if Macron Apologizes*, WASH. POST (Aug. 27, 2019), https://www.washingtonpost.com/world/brazil-rejects-g-7-amazon-aid-citing-its-lack-of-involvement-in-decision-to-grant-it/2019/08/27/4d8b0eb8-c8b6-11e9-9615-8f1a32962e04_story.html (quoting Bolsonaro's stance that the international community's response to the Amazon fires is disguised colonialism).

283. See *supra* note 267 (statutes and case law recognizing legal rights of nature).

C. BRINGING A CASE AGAINST BRAZIL

1. *Who Should Bring the Case Against Brazil?*

Peru should bring a case before the ICJ against Brazil. Peru has the legitimacy to bring a case against Brazil as a signatory of the ACT and because of its involvement in the ACTO.²⁸⁴ Of the eight ACTO countries, Peru alone has said that the current structure for preservation of the Amazon Rainforest is inadequate.²⁸⁵ Additionally, Peru contains the second largest portion of the Amazon Rainforest.²⁸⁶ Thus, Peru will face large consequences if Brazil continues down a path of increased deforestation, and Peru already faced injury stemming from the Brazilian forest fires.²⁸⁷

Yet, there may be concern with Peru bringing a case because of internal turmoil.²⁸⁸ Brazil has expressed concern in the past that it would not recognize a country's standing to bring a case before the ICJ if Brazil felt the government of that country was illegitimate.²⁸⁹ Peru's internal turmoil may be reason enough for Brazil not to recognize its legitimacy.²⁹⁰ However, while the Peruvian crisis may

284. *See supra* note 120.

285. *See Seven Countries Sign Forest Protection Pact, supra* note 99 (reporting that Peru signed the forest protection pact created at an emergency meeting between the Amazon countries but quoting Peru's President as saying "good will alone is not enough anymore.").

286. *See Amazon Basin Forest, supra* note 7 (noting Peru's share of the Amazon Rainforest is approximately 780,690 square kilometers or about ten percent of the Amazon Rainforest).

287. *See Yeung, supra* note 98 (reporting that Peru has experienced an increase in children's hospitalization for asthma following the Brazilian forest fires).

288. *Peru's President Dissolves Congress to Push Through Anti-Corruption Reforms*, THE GUARDIAN (Sept. 30, 2019), <https://www.theguardian.com/world/2019/oct/01/perus-president-dissolves-congress-to-push-through-anti-corruption-reforms> (describing the constitutional crisis in Peru, in which the Peruvian President disbanded Congress and mandated new elections in 2020, and the opposition party voted to temporarily suspend the President and appoint an interim president to replace the current President).

289. *See Aaron Gray-Block, Honduras Takes Dispute Against Brazil to U.N. Court*, REUTERS (Oct. 29, 2009), <https://www.reuters.com/article/us-honduras-brazil-un-idUSTRE59S3SC20091029> (reporting on Brazil's belief that the de facto Honduran government is illegitimate because Brazil only recognizes the President of Honduras, and not the government, which took over after a military coup).

290. *Compare Gray-Block, supra* note 289, *with Peru's President Dissolves Congress to Push Through Anti-Corruption Reforms, supra* note 288 (reporting that

linger, new elections have since concluded, and the Peruvian President still retains power.²⁹¹

2. *The ICJ has Jurisdiction to Hear a Claim Against Brazil*

The ICJ receives legitimacy as the U.N.'s principal judicial organ.²⁹² Legitimacy in turn ensures compliance with judgments and the remedies that might come with judgments.²⁹³ The ICJ gains legitimacy by issuing judgments that compromise between the rhetoric and needs of the States before it.²⁹⁴ Compromise between an impartial judiciary may be the only way forward to a solution for the Brazilian Amazon.²⁹⁵

The ICJ first answers questions of jurisdiction and admissibility, and it cautions litigants to argue only on these issues in preliminary hearings.²⁹⁶ Therefore, the first question is whether a case against Brazil would meet jurisdiction and admissibility requirements.²⁹⁷ A case proceeding against Brazil for violating no-harm rule would meet

the opposition party voted to temporarily suspend the Peruvian President and appoint an interim president).

291. See *Peru Election: Crushing Blow for President's Opponents Popular Force*, BBC NEWS (Jan. 27, 2020), <https://www.bbc.com/news/world-latin-america-51208274> (reporting on a favorable election outcome for the Peruvian President's goal of pushing anti-corruption efforts but noting that the opposition party still has fervent supporters backing the former president and her family, despite them being the subject of legal proceeding).

292. See *The Court*, ICJ, <https://www.icj-cij.org/en/court> (last visited Nov. 9, 2019) ("The Court's role is to settle, in accordance with international law, legal disputes submitted to it by States and to give advisory opinions on legal questions referred to it by authorized United Nations organs and specialized agencies.").

293. See Shai Dothan, *How International Courts Enhance Their Legitimacy*, 14 THEORETICAL INQ. L. 455, 458 (2013) (explaining why courts seek legitimacy and the benefits of legitimacy).

294. See *id.* at 461–62 (describing the ICJ's compromise practice in the context of the *Oil Platforms* case).

295. Anthony Boadle, *Amazon Fires Scorch Bolsonaro's Reputation Abroad, but not in Brazil*, REUTERS (Aug. 29, 2019), <https://www.reuters.com/article/us-brazil-environment-politics-analysis/amazon-fires-scorch-bolsonaros-reputation-abroad-but-not-in-brazil-idUSKCN1VJ2JQ> (detailing Bolsonaro's nationalist rhetoric and the international community's responding criticism).

296. See *Nuclear Tests (Austl. v. Fr.)* 1974 I.C.J. 253, 258 ¶¶ 56–57, 59 (Dec. 20) (preliminary judgment).

297. See Paulsson, *supra* note 100, at 603 (describing ICJ's determination on jurisdiction and admissibility as final to availability of review).

the ICJ's jurisdictional mandates.²⁹⁸

Admissibility would depend on whether the party bringing suit had exhausted other provisions under the CBD and whether the claim is timely.²⁹⁹ This section assumes that parties have exhausted all other provisions for dispute settlement under the CBD.³⁰⁰ Under CBD Article 27(3)(b), a dispute can be resolved by submission of a case to the ICJ.³⁰¹ Brazil, however, would still have to agree to submission of a case to the ICJ under the CBD's dispute resolution mechanisms for a case against it to be admissible.³⁰² A claim against Brazil would otherwise meet the standard for timeliness because Brazil has not changed its position significantly to reduce deforestation in the Amazon.³⁰³ Brazil has not changed its detrimental forest policies, making an application by another State admissible.³⁰⁴

3. *The ICJ has Jurisdiction to hear a claim against Brazil*

Generally, the ICJ can determine whether it has jurisdiction after considering relevant facts and independently of what applicants may argue.³⁰⁵ Therefore, a case could be brought against Brazil, and the ICJ

298. See discussion *infra* Sections III.A.1, III.A.2.

299. See Paulsson, *supra* note 100, at 603 (2005) (noting admissibility turned on whether bringing party had allowed its right to arbitrate its claim lapse in a contract dispute).

300. See CBD, *supra* note 9, art. 27 (requiring parties to first enter negotiations to settle, then to seek mediation, and then submission of the case to the ICJ).

301. See *id.* art. 27(3)(b) ("Submission of the dispute to the International Court of Justice.?).

302. See *id.* art. 27, ¶ 4 (allowing parties that have not filed declarations to later agree to submission of a case to the ICJ); see also Paulsson, *supra* note 100, at 601 (describing the requirement of consent for submission of a case to the ICJ).

303. See *Nuclear Tests (Austl. v. Fr.)*, 1974 I.C.J. 253, ¶¶ 56–57, 59 (Dec. 20) (noting mootness of issue after France changed its position on nuclear testing in French Polynesia).

304. *Accord id.* (holding case inadmissible after cessation of complained activities); *Nuclear Tests (N.Z.)* 1974 I.C.J. 457, ¶¶ 59, 60, 62 (Dec. 20) (holding case inadmissible after cessation of complained activities); see Rink, *supra* note 111, at 43 (detailing erosions of environmental protections present in the 2012 Forest Code); de Bolle, *Amazon Rainforest Hearing*, *supra* note 7, at 3–4 (describing Bolsonaro's damaging policy changes); *What is the Amazon Fund?*, *supra* note 140 (identifying the presidential decree discontinuing all committees of the Amazon Fund).

305. See *Fisheries Jurisdiction (Spain v. Can.)* 1998 I.C.J. 432, 450–51, ¶ 38 (Dec. 4) (holding that the Court decides jurisdiction after consideration of all facts and

could simply decide that it has jurisdiction to hear the case.³⁰⁶ There are several avenues to claim jurisdiction over a case concerning the forest fires in the Brazilian Amazon.³⁰⁷

i. The ICJ has Jurisdiction under Article 36(1) of the Statute of the Court

The Statute of the International Court of Justice (ICJ Statute) confers jurisdiction onto the ICJ in “all cases which the parties refer to it and all matters specially provided for in the Charter of the United Nations or in treaties and conventions in force.”³⁰⁸ The principal barrier to jurisdiction, which is expressed in the beginning of the quoted language, is State consent to adjudication.³⁰⁹ States must refer a case to the ICJ, and this referral necessarily requires State consent to ICJ jurisdiction.³¹⁰

Brazil has only recognized ICJ jurisdiction once since the ICJ’s inception and did so only for five years.³¹¹ In its only litigation before the ICJ, *Certain Questions Concerning Diplomatic Relationships*,³¹² Brazil did not participate in the case, and the case ultimately ended when the other party discontinued the case.³¹³ Brazil did not participate because it disputed the Honduran government’s legitimacy, and Brazil believed that illegitimate governments do not have standing to bring a

arguments); *see also Nuclear Tests (N. Z.)*, 1974 I.C.J. at ¶ 23 (holding that the Court possesses inherent jurisdiction by simply existing as a judicial body).

306. *See* Paulsson, *supra* note 100, at 603 (describing ICJ’s jurisdiction determination as a pure abstraction).

307. *See* discussion *infra* Sections III.A.1.i–iii.

308. Statute of the International Court of Justice, art. 36, ¶ 1, July 17, 1998, 59 Stat. 1031 [hereinafter ICJ Statute].

309. *See* Shany, *supra* note 104, at 782–83 (describing State consent to adjudication as a limiting principle to ICJ jurisdiction).

310. *See* ICJ Statute, art. 36, ¶ 1 (stating the requirements for jurisdiction).

311. Declaration of Brazil Recognizing as Compulsory the Jurisdiction of the Court, in Conformity with Article 36, Paragraph 2, of the Statute of the International Court of Justice, Feb 12, 1948, 15 U.N.T.S. 1, 221 (record of Brazil’s declaration on ICJ jurisdiction).

312. *Certain Questions Concerning Diplomatic Relationships (Hond. v. Braz.)* 2010 I.C.J. 303 (May 12).

313. *See id.* at 304 (May 12) (granting Honduras’ discontinuance application and noting that Brazil had taken no steps in the proceeding).

case before the ICJ.³¹⁴ A legitimate country's case against Brazil may merit Brazil's participation.³¹⁵

The "treaties and conventions in force" language from the ICJ Statute references matters the United Nations or international law specifically provide.³¹⁶ The CBD satisfies this requirement in its dispute resolution procedures.³¹⁷ Brazil has not submitted a declaration to the CBD on whether it accepts case submission to the ICJ as a dispute resolution mechanism.³¹⁸ However, that does not preclude ICJ jurisdiction because parties can still decide to allow a dispute to be submitted to the ICJ through an agreement.³¹⁹

Additionally, to satisfy jurisdiction under Article 36, a claim must be capable of evaluation under the CBD's legal standards.³²⁰ The CBD articulates an intelligible standard in Article 3 because it qualifies which types of harms—environmental—qualify as transboundary harms.³²¹ Deforestation measurement and attribution techniques through satellite imaging can determine precisely where and how much deforestation occurs, and Brazil currently employs such satellite imaging through INPE.³²² Furthermore, CBD Decision VI/11 gives

314. See Gray-Block, *supra* note 289 (describing Brazil's belief that the current Honduran regime did not have basis to bring suit against Brazil because it was not the legitimate government of Honduras).

315. See *id.*

316. See ICJ Statute, art. 36, ¶ 1 (stating the requirements for ICJ jurisdiction).

317. See *id.*; CBD, *supra* note 9, art. 27, ¶ 3(b) (providing submission of a dispute to the ICJ as a means of dispute resolution in certain circumstances).

318. See *Status of Convention on Biological Diversity*, U.N., https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-8&chapter=27&clang=en (last visited Mar. 13, 2020) (providing States' declarations to the CBD depositary with no declarations by Brazil).

319. See CBD, *supra* note 9, art. 27, ¶ 4 ("If the parties to the dispute have not, in accordance with paragraph 3 above, accepted the same or any procedure, the dispute shall be submitted to conciliation in accordance with Part 2 of Annex II *unless the parties otherwise agree.*") (emphasis added).

320. See *Oil Platforms (Iran v. U.S.)* 1996 I.C.J. 803, ¶ 16 (Dec. 12) (holding ICJ must ascertain whether the violations of a treaty fall within the provisions of the treaty and whether, as a consequence, the dispute is one which the Court has jurisdiction *ratione materiae* to entertain, pursuant to treaty).

321. See CBD, *supra* note 9, art. 3 (stating States' responsibility to ensure their actions do not cause environmental damage to other States or of areas beyond national jurisdiction).

322. See Andrey Krasovskii et al., *Monitoring Deforestation in Rainforests Using Satellite Data: A Pilot Study from Kalimantan, Indonesia*, 9 *FORESTS* 389, 390

substance to transboundary harm.³²³

Other articles in the CBD also provide intelligible standards for dispute resolution.³²⁴ For example, Article 10 requires contracting parties to the CBD to institute measures that minimize or avoid impacts on biodiversity.³²⁵ Therefore, under ICJ Statute, Article 36, paragraph 1, a claim against Brazil would be within the ICJ's jurisdiction.³²⁶

ii. The ICJ has Jurisdiction Under Subsections (a) and (c) of Article 36(2) of the Statute of the Court

Article subsections (a) and (c) of Article 36(2) also provide avenues to address the jurisdictional question.³²⁷ The difficulty, again, is that Brazil would have to accept the ICJ's compulsory jurisdiction, although the statute allows for conditional acceptance.³²⁸ Again, Brazil did recognize the ICJ's compulsory jurisdiction at one time.³²⁹ A case against Brazil would otherwise meet jurisdictional requirements under

(2018) (arguing satellite remote sensing techniques are capable of determining human driven deforestation and accounting for complex ecological land cover and change processes).

323. See *Summary of Transboundary Environmental Damage*, *supra* note 77, ¶¶ 46–47 (regarding increased salinity of the Aral Sea, general habitat degradation, and climate changes in the region as measures transboundary harms with respect to the Aral Sea, and regarding the global impact of smoke from forest fires).

324. See, e.g., CBD, *supra* note 9, art. 10 (obligating contracting parties to ensure practices which promote the sustainable use of components of biological diversity).

325. See *id.* art. 10(c) (“Protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements.”).

326. See ICJ Statute, art. 36 ¶ 1 (recognizing jurisdiction through referral and international obligations under international multilateral treaties); CBD, *supra* note 9, art. 27 (providing for ICJ jurisdiction in dispute resolution).

327. See ICJ Statute, art. 36 ¶¶ 2(a), (c) (stating jurisdiction on treaty interpretation and on “the existence of any fact which, if established, would constitute a breach of an international obligation” when States recognize the compulsory jurisdiction of the ICJ).

328. See *id.* art. 36, ¶¶ 2–3 (stating declarations under paragraph 2 could be made unconditionally or conditionally on reciprocity of other States accepting jurisdiction).

329. See Declaration of Brazil Recognizing as Compulsory the Jurisdiction of the Court, in Conformity with Article 36, Paragraph 2, of the Statute of the International Court of Justice, Feb 12, 1948, 15 U.N.T.S. 221, 222–23 (declaring recognition of compulsory jurisdiction based on reciprocity of other States and only for five years).

the subsections because the case would determine whether Brazil's national policy could violate the CBD and whether Brazil is causing a dieback scenario.³³⁰

iii. The ICJ has Jurisdiction Under the CBD

A party could successfully argue the ICJ has jurisdiction over the case under Article 3.³³¹ CBD Article 4 provides that the CBD applies to components³³² of biological diversity,³³³ within a nation's jurisdiction, and to processes and activities under the control or jurisdiction of a nation, regardless of where these processes and activities are carried out and where effects may occur.³³⁴ Forest fires threaten tree biodiversity in the Brazilian Amazon, and the Amazon Rainforest as a whole.³³⁵ With respect to the latter application, Brazil's forest management policies promote activities under Brazil's control.³³⁶

V. CONCLUSION

"What we are doing to the forests of the world is but a mirror reflection of what we are doing to ourselves and to one another." – Chris Maser.

The Brazilian Amazon is burning at an alarming rate and is pushing closer to significant and irreversible damage. As climate change intensifies, so, too, will fires in the Brazilian Amazon; and with them, the extinction of species, the severity of weather events, and much more. For Brazil to comply with the CBD and customary international

330. See CBD, *supra* note 9, art. 3 (no-harm rule); ICJ Statute, art. 36 ¶¶ 2(a), (c) (granting jurisdiction for resolution of treaty interpretations and for disputes on facts amounting to violations of international law).

331. See *Corfu Channel (U.K. v. Alb.)* 1949 I.C.J. 4, 22 (Apr. 9) (no-harm rule); *Barcelona Traction, Light and Power Company, Limited (Belg. v. Spain)* 1970 I.C.J. 3, ¶ 33 (Feb. 5) (recognizing State obligations to the international community would necessarily vest a legal interest in protection in all States).

332. See CBD, *supra* note 9, art. 2, ¶ 2 (defining biodiversity as diversity between and within species and ecosystems).

333. See *id.* art. 2, ¶ 1 (definition).

334. See *id.* art. 4(a), (b) (providing jurisdictional scope of the CBD's provisions).

335. Trees would be the components of the biodiversity threatened by forest fires. See *id.* art. 2, ¶¶ 1–2.

336. See *id.* art. 4(b).

law, it must ensure that its forest management policies do not cause environmental damage to other countries. Currently, Brazil seems to be out of compliance. By strengthening the Amazon Fund or by granting the Amazon Rainforest legal personhood, Brazil can ensure investment in the Amazon Rainforest and bolster protections for the Amazon Rainforest to ensure that a dieback scenario does not occur.